Terms in standards of TC20/SC14

Term and definition	**Reference number of documents**	N clause/subclause	TC/SC/WG

1 *a-basis allowable*

ISO 10786:2011 3.1 TC20/SC14/WG1

1 A-basis allowable (preferred term)
A-basis design allowable (admitted term)
A-value (admitted term)

mechanical strength value above which at least 99 % of the population of values is expected to fall, with a confidence level of 95 %
[ISO 16454:2007]

ISO 14623:2003 2.1 TC20/SC14/WG1

2 mechanical strength value above which at least 99 % of the population of values is expected to fall, with a confidence level of 95 %
cf. "B" basis allowable (2.6)

ISO 16454:2007 3.1 TC20/SC14/WG1

3 mechanical strength value above which at least 99 % of the population of values is expected to fall, with a confidence level of 95 %

ISO 21648:2008 2.1.1 TC20/SC14/WG1

4 mechanical strength value above which at least 99 % of the population of values is expected to fall, with a confidence level of 95 %
NOTE See also B-basis allowable (2.1.4).

ISO 24638:2008 3.1 TC20/SC14/WG1

5 mechanical strength value above which at least 99 % of the population of values is expected to fall, with a confidence level of 95 %.
NOTE See also B-basis allowable (3.3).

2 *A-basis design allowable*

ISO 10786:2011 3.1 TC20/SC14/WG1

6 A-basis allowable (preferred term)
A-basis design allowable (admitted term)
A-value (admitted term)

mechanical strength value above which at least 99 % of the population of values is expected to fall, with a confidence level of 95 %
[ISO 16454:2007]

3 *abbreviated checklist*

ISO 23041:2018 3.1 TC20/SC14/WG3

7 comprehensive list of items and time schedule of tasks to be done that are needed to check each stepby-step task at the telemetry/command (TLM/CMD) console and at the network console

4 *ablation cooling*

	ISO 17540:2016	2.25 Engine cooling 2.25.9	TC20/SC14/WG2

8 prevention of engine design element overheating through heat absorption by a material with its mass entrapment

5 *absolute capacitance*

	ISO 11221:2011	2.23	TC20/SC14/WG4

9 satellite capacitance (preferred term)
absolute capacitance (admitted term)

capacitance between a satellite body and the ambient plasma

6 *absorbed dose*

D	**ISO 15856:2010**	3.1.1	TC20/SC14/WG4

10 amount of energy imparted by ionizing radiation per unit mass of irradiated matter
NOTE 1 The quotient of d ε by dm, where d ε is the mean energy imparted by ionizing radiation to matter of mass dm, is

$D = d\bar{\varepsilon}/dm$
NOTE 2 The special name of the unit for absorbed dose is the gray (Gy). 1 Gy = 1 J·kg^{-1}.

D	**ISO 21980:2020**	3.4	TC20/SC14/WG4

11 amount of energy imparted by ionizing radiation per unit mass of irradiated matter
Note 1 to entry: The quotient of d by dm where d the mean energy imparted by ionizing radiation to matter of mass dm is
See formula.
Note 2 to entry: The special name of the unit for absorbed dose is the gray (Gy). 1 Gy = 1 J·kg^{-1}.
[SOURCE: ISO 15856:2010, 3.1.1]

7 *absorptance*

α	**ISO 16378:2013**	3.1	TC20/SC14/WG6

12 $\alpha = \Phi a/\Phi m$
where Φa is the absorbed radiant flux or the absorbed luminous flux and Φm is the radiant flux or luminous flux of the incident radiation
[SOURCE: ISO 80000-7]

8 *accelerated test*

	ISO 17546:2016	3.1	TC20/SC14/WG1

13 test designed to shorten the controlled environmental test time with respect to the service use time by increasing the frequency of occurrence, amplitude, duration, or any combination of these of environmental stresses during service use. [7]

[7] MIL-STD-810. DEPARTMENT OF DEFENSE TEST METHOD STANDARD ENVIRONMENTAL ENGINEERING CONSIDERATIONS AND LABORATORY TESTS”.

9 *acceleration factor*

	ISO 15856:2010	3.1.2	TC20/SC14/WG4

14 ratio of dose rate between simulation and expectation at space application for the same type of radiation

10 *acceptable risk*

ISO 10795:2019 3.1 TC20/SC14/WG5

15 safety (3.210) risk (3.206), the severity (3.215) and the probability of which may be reasonably accepted by humanity, without durable or irreversible foreseeable consequence on health, Earth, and the environment (3.92), at the present time and in the future
EXAMPLE A safety risk may be acceptable for crew members of a manned space vehicle (3.225) when it is comparable to that of test (3.239) pilots, for the personnel participating in hazardous activities when it is comparable to that of industrial workers, for people, public and private property, and the environment, when it is comparable to that of other hazardous human activities (e.g. high-speed surface travel).
[SOURCE: ISO 14620-2:2011, 3.1]

ISO 11231:2019 3.1.1 TC20/SC14/WG5

16 safety risk, the severity, and the probability (3.1.3) of which, may be reasonably accepted by humanity, without durable or irreversible foreseeable consequences on health, Earth, and the environment, at the present time and in the future
[SOURCE: ISO 14620 2:2011, 3.1, modified — The EXAMPLE has been removed]

ISO 17689:2015 2.12 TC20/SC14/WG2

17 safety risk, the severity and the probability of which may be reasonably accepted by humanity, without durable or irreversible foreseeable consequence on health, Earth, and the environment, at the present time and in the future
EXAMPLE A safety risk may be acceptable for crew members of a manned space vehicle when it is comparable to that of test pilots, for the personnel participating in hazardous activities when it is comparable to that of industrial workers, for people, public and private property, and the environment, when it is comparable to that of other hazardous human activities (e.g. high-speed surface travel).
[SOURCE: ISO 14620-2:2011, 3.1]

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11 *acceptance*

ISO 10795:2019 3.2, 3.3 TC20/SC14/WG5

18 <act> act, means of which customer (3.78) certifies that the object developed and manufactured in accordance with his/her specification (3.227), and he/she agrees with the reveal deviations (3.86) and failures (3.98) ("complaints") and that this object is free from defects (3.79) under its delivery by the supplier (3.232)

<process> part of the verification (3.244) process (3.171), which demonstrates that the product (3.173) meets specified acceptance margins
[SOURCE: EN 16601-00-01:2015, 2.3.2]

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12 *acceptance criteria*

ISO 10795:2019 3.4 TC20/SC14/WG5

19 minimum requirements (3.201) that it is necessary for an item (3.134) to satisfy for formal acceptance (3.2, 3.3)

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13 *acceptance load*

ISO 14622:2000 2.5.8 TC20/SC14/WG1

20 acceptance load
proof load

load applied during acceptance testing and which is equal to the limit load multiplied by an acceptance factor Jp

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14 *acceptance of risk*

ISO 10795:2019 3.5 TC20/SC14/WG5

21 decision to cope with consequences, should a risk (3.206) scenario materialize
Note 1 to entry: A risk can be accepted when its magnitude is less than a given threshold, defined in the risk management policy (3.209).
Note 2 to entry: In the context of risk management (3.208), acceptance (3.2, 3.3) can mean that even though a risk is not eliminated, its existence and magnitude are acknowledged and tolerated.
[SOURCE: ISO 17666:2016, 3.1.1]

ISO 17666:2016 3.1.1 TC20/SC14/WG5

22 decision to cope with consequences, should a risk scenario materialise
Note 1 to entry: A risk can be accepted when its magnitude is less than a given threshold, defined in the risk management policy.
Note 2 to entry: In the context of risk management, acceptance can mean that even though a risk is not eliminated, its existence and magnitude are acknowledged and tolerated

15 *acceptance team*

ISO/TR 17400:2003 3.9 TC20/SC14/WG3

23 acceptance team
test supervision

group of experts formed by the customer (organization, company, etc.) with the goal of coordinating work during specific testing or acceptance phases

16 *acceptance test*

ISO 10785:2011 3.1 TC20/SC14/WG1

24 required formal test conducted on flight hardware to ascertain that the materials, manufacturing processes and workmanship meet specifications and that the hardware is acceptable for intended usage

ISO 10786:2011 3.2 TC20/SC14/WG1

25 required formal test conducted on flight hardware to ascertain that the materials, manufacturing processes, and workmanship meet specifications and that the hardware is acceptable for intended usage
[ISO 14623:2003]

ISO 10795:2019 3.7 TC20/SC14/WG5

26 test (3.239) to determine that a system (3.234), subsystem (3.231), component (3.48) or functional part is capable of meeting performance (3.166) requirements (3.201) prescribed in a purchase specification (3.227) or other document (3.88) specifying what constitutes the adequate performance capability for the item (3.134) and to demonstrate that the item is free from manufacturing defects (3.79)

ISO 17540:2016 2.34 Types of engine tests: Test purposes 2.34.4 TC20/SC14/WG2

27 engine check test at acceptance inspection after which a decision is made about engine availability for delivery to operation

17 *acceptance tests*

	ISO 14623:2003	2.2	TC20/SC14/WG1
28	required formal tests conducted on flight hardware to ascertain that the materials, manufacturing processes and workmanship meet specifications and that the hardware is acceptable for intended usage		
	ISO 21648:2008	2.1.2	TC20/SC14/WG1
29	required formal tests conducted on hardware items to ascertain that the materials, manufacturing processes and workmanship meet specifications		
	ISO 24917:2010	3.32	TC20/SC14/WG2
30	required formal tests conducted on flight hardware to ascertain that the materials, manufacturing processes and workmanship meet specifications and that the hardware is acceptable for intended usage [ISO 14623:2003, definition 2.2]		

18 *accepted risk*

	ISO 10795:2019	3.6	TC20/SC14/WG5
31	hazard (3.120) that has not been eliminated and for which the residual risk (3.202) is deemed low enough to continue operation and that has been accepted by project (3.178)/program management (3.146) on the basis of documented risk (3.206) acceptance (3.2, 3.3) rationale		

19 *accessory equipment*

	ISO 17540:2016	2.47 Test stands: General 2.47.8	TC20/SC14/WG2
32	aggregate of mechanisms and devices that provide stand operation such as transportation, loading, unloading, engine mounting and removal		

20 *accident*

	ISO 10795:2019	3.8	TC20/SC14/WG5
33	accident mishap undesired event arising from operation of any project (3.178)-specific items (3.134) which results in: a) human death or injury; b) loss of, or damage to, hardware (3.119), software (3.217) or facilities which could then affect the accomplishment of the mission (3.154); c) loss of, or damage to, public or private property; or d) detrimental effects on the environment (3.92) [SOURCE: ISO 14620-1:2018, 3.1.1, modified – The term "mishap" has been added as an alternative.]		

	ISO 14620-1:2018	3.1.1	TC20/SC14/WG5

34 undesired event arising from operation of any project-specific items which results in:
a) human death or injury;
b) loss of, or damage to, hardware, software or facilities which could then affect the accomplishment of the mission;
c) loss of, or damage to, public or private property; and
d) detrimental effects on the environment
Note 1 to entry: Accident and mishap are synonymous.
[SOURCE: EN 16601-00-01:2015, 2.3.3]

	ISO 17689:2015	2.11	TC20/SC14/WG2

35 mishap
accident
unplanned event or series of events resulting in damage or potential for damage
Note 1 to entry: While sometimes used synonymously, an "accident" generally means a severe type of "mishap".
[SOURCE: ISO 14620-2:2011, 3.20]

21 *accumulated hazard materials*

	ISO 17540:2016	2.49 Stand systems 2.49.9	TC20/SC14/WG2

36 detection system
stand system (2.47.5) intended for environment composition control with appropriate audible and luminous signal warnings when the quantity of hazard materials exceed permissible limits

22 *accuracy*

	ISO 14952-1:2003	2.1	TC20/SC14/WG6

37 measure of how close a value is to the "true" value

	ISO 16781:2013	2.1	TC20/SC14/WG1

38 measure of how close a value is to the "true" value.
[SOURCE: ISO 14952-1:2003]

23 *acoustic reverberation chamber*

	ISO 19924:2017	3.1	TC20/SC14/WG2

39 acoustic chamber built in hard and highly reflective surface walls such that the sound field therein
becomes diffused

24 *acquiring agency*

	ISO 23041:2018	3.2	TC20/SC14/WG3

40 organization that is planning and managing the development and acquisition contracts for the space system, understands the engineering and technical aspects of the system’s operation and acts as a provider of particular equipment if necessary

25 *acquiring organization*

	ISO 16127:2014	3.1	TC20/SC14/WG7

41 organization that plans and manages the development and acquisition contracts for the space system
Note 1 to entry: The responsibilities of the acquiring organization include the engineering and technical aspects of the space system's design and operations.

26 *action*

	ISO 10795:2019	3.9	TC20/SC14/WG5

42 task negotiated between two and only two persons, one decision maker and one holder, whose result leads to an expected result as a description of an operation in the formulation of a solution, and is characterized by objectives in terms of cost, quality (3.188) and due date

27 *action item*

	ISO 10795:2019	3.10	TC20/SC14/WG5

43 assignment to a designated organization (3.163) or individual the accomplishment of a defined objective within a specified time frame

28 *activation*

	ISO 17546:2016	3.2	TC20/SC14/WG1

44 process of making an assembled cell functional, by introducing an electrolyte at the manufacturing facility during cell production, which is used to define the start of battery shelf life[1][2][3][8]

[1] SMC standard SMC-S-017, ”LITHIUM-ION BATTERY FOR SPACECRAFT APPLICATIONS”
[2] NASA/TM-2009-2215751:NESC-RP-08-75/06-069-I, ”Guidelines on Lithium-ion Battery Use in Space Applications”
[3] JSC20793 rev.B, ”CREWED SPACE VEHICLE BATTERY SAFETY REQUIREMENTS”
[8] NAVSEA S9310-AQ-SAF-10 SEOND REVISON. TECHNICAL MANUAL FOR NAVY LITHIUM BATTERY SAFETY PROGRAM RESPONSIBILITIES AND PROCEDURES”

29 *active fibre optic component*

	ISO 20780:2018	3.1.6	TC20/SC14/WG1

45 fibre optic components that require a source of energy for their operation to realize the function of electro-optical/optical-electro conversion, including semiconductor sources (LD, LED, DFB, QW, SQW, VCSEL), semiconductor detectors (PD, PIN,APD), fibre lasers, optical amplifiers, wavelength transducers, optical modulators and optical switches

30 *active gap*

	ISO 11221:2011	2.1	TC20/SC14/WG4

46 gap between solar cells across which a potential difference is present when the solar array power is available

31 *active thermal control system*

	ISO 16691:2014	3.1.1	TC20/SC14/WG6

47 system where the active thermal control method is used
Note 1 to entry: The active thermal control method is the procedure to control the temperature using mechanical mobile components or fluid, using electric energy from a heater, changing the component's thermo-physical property, or utilizing another technology to change/control the temperature.
[SOURCE: JERG-2-310:2009]

32 *actuator*

	ISO 26871:2012	3.1.1	TC20/SC14/WG1

48 component that performs the moving function of a mechanism
NOTE An actuator can be either an electric motor, or any other mechanical (e.g. spring) or electric component or part providing the torque or force for the motion of the mechanism

33 *adaptive structures*

	ISO 10786:2011	3.3	TC20/SC14/WG1

49 autonomous structural systems which incorporate sensors, processors, and actuators to enable adaptation to changing environmental conditions, thereby enhancing safety, stability, vibration damping, acoustic noise suppression, aerodynamic performance and optimization, pointing accuracy, load redistribution, damage response, structural integrity, etc.

34 *adjustable engine*

	ISO 17540:2016	2.6 Low-thrust engine types by way of work process 2.6.9	TC20/SC14/WG2

50 low-thrust engine (2.1.3) that has a device to change the thrust

35 *adjustable nozzle*

	ISO 17540:2016	2.15 Nozzle types 2.15.10	TC20/SC14/WG2

51 nozzle (2.12.16) whose expansion ratio can be changed in the process of operation

36 *aerospace fluid*

	ISO 14624-6:2006	3.1	TC20/SC14/WG6

52 fluid that is commonly used in the fabrication, development and processing of materials and in the production of aerospace and ground support equipment and propellants
EXAMPLES Cleaning agents, lubricants and solvents.

	ISO 14624-7:2006	3.1	TC20/SC14/WG6

53 fluid that is commonly used in the fabrication, development, processing of materials and production of aerospace and ground support equipment
EXAMPLES Cleaning agents, lubricants and solvents.

37 *aerospace material*

	ISO 14624-6:2006	3.2	TC20/SC14/WG6

54 material used in the fabrication and/or production of ground support and flight components and systems

38 *afterburner*

	ISO 17540:2016	2.51 Stand system elements 2.51.13	TC20/SC14/WG2

55 stand device for the removal of toxic and explosive propellants through afterburning

39 *aftereffect*

	ISO 17540:2016	2.9 Low-thrust engine performance 2.9.9	TC20/SC14/WG2

56 thruster electric valve reenergizing up to the moment when the thrust of the chamber pressure fall to a value equal to 0,1 of the thrust of the chamber pressure in the steady-state continuous operation mode

40 *agglutinate*

	ISO 10788:2014	2.1.1	TC20/SC14/WG4

57 vesiculated glass bonded particle containing other particles (lithic fragments), of which the bonding glass contains spherical particles of iron
Note 1 to entry: The lunar spherules are typically 3 - 100 nanometers in diameter and formed contemporaneous with the glass.
Note 2 to entry: Six features characterize lunar agglutinates: size, surface area with relation to volume, composition, nanophase iron content, flow banding, and multiple generations.

41 *aging*

	ISO 17546:2016	3.3	TC20/SC14/WG1

58 permanent loss of capacity due to repeated cycling or passage of time from activation. [3]

[3] JSC20793 rev.B, "CREWED SPACE VEHICLE BATTERY SAFETY REQUIREMENTS"

42 *air mass*

AM	**ISO 15387:2005**	3.1	TC20/SC14/WG1

59 length of path through the earth's atmosphere traversed by the direct solar beam, expressed as a multiple of the path traversed to a point at sea level with the sun directly overhead
NOTE The value of air mass is 1 at sea level with a cloudless sky when the sun is directly overhead and the air pressure
P = 1,013 × 10¬5 Pa.
At any point on the earth surface, the value of the air mass is given by:
AM = (P/P0) × (1/sinθ)
where
P = local air pressure in pascals;

43 *air mass zero*

AM0	**ISO 15387:2005**	3.2	TC20/SC14/WG1

60 absence of atmospheric attenuation of the solar irradiance at one astronomical unit from the sun

44 *alarm system*

ISO 17540:2016	2.49 Stand systems 2.49.10	TC20/SC14/WG2

61 stand system (2.47.5) intended to provide luminous and audible signal warnings during hazardous stand activities

45 *Albedo trapped particles*

ISO 17761:2015	2.5	TC20/SC14/WG4

62 part of cosmic ray charged radiation with rigidity below geomagnetic cut-off produced in interactions of high energy cosmic rays with residual atmosphere of the Earth which execute their trajectories in the Earth magnetic field

46 *alert*

ISO 10795:2019	3.11	TC20/SC14/WG5

63 formal notification to users, informing them of a failure (3.98) or nonconformity (3.157) of an item (3.134), already released for use or not, that can also be present on other items already delivered (e.g. items with identical design (3.82, 3.83) concept, material (3.148), component (3.48) or process (3.171))
Note 1 to entry: An alert can also be raised when a deficiency in a specified requirement (3.201) that can affect the fitness for purpose in the defined application has been identified.
[SOURCE: EN 16601-00-01:2015, 2.3.6]

47 *all-fire level*

ISO 26871:2012	3.1.2	TC20/SC14/WG1

64 lowest level of the fire stimulus (including rise time, shape, duration), which results in initiation of a first element (initiator) within a specific reliability and confidence level as determined by test and analysis
NOTE 1 The stimulus duration shall be compliant with the system.
NOTE 2 It is recommended that the test sequence be carried out at the lowest temperature of the operating range.
NOTE 3 The probability of functioning should be equal to or better than 0,999 at the 95 % confidence level

48 *allowable load*

ISO 10786:2011	3.4	TC20/SC14/WG1

65 maximum load that can be accommodated by a structure or a component of a structural assembly without potential rupture, collapse, or detrimental deformation in a given environment
NOTE 1 “Allowable loads” commonly correspond to the statistically based ultimate strength, buckling strength, and yield strength, or maximum strain (for ductile materials).
NOTE 2 “Allowable load” is often referred to as just “allowable”.

	ISO 14623:2003	2.3	TC20/SC14/WG1

66 allowable load (stress)
maximum load (stress) that can be accommodated by a material/structure without potential rupture, collapse or detrimental deformation in a given environment
NOTE Allowable loads (stresses) commonly correspond to the statistically based minimum ultimate strength, buckling strength, and yield strength, respectively.

	ISO 16454:2007	3.2	TC20/SC14/WG1

67 allowable load
allowable stress
allowable strain
maximum load (stress, strain) that can be accommodated by a material/structure without potential rupture, collapse or detrimental deformation in a given environment
NOTE Allowable loads (stresses, strains) commonly correspond to the statistically based minimum ultimate strength, buckling strength and yield strength, respectively.

	ISO 21648:2008	2.1.3	TC20/SC14/WG1

68 allowable load
allowable stress
allowable strain
maximum load that can be accommodated by a structure/material without rupture, collapse or detrimental deformation in a given environment
NOTE Allowable loads commonly correspond to the statistically-based minimum ultimate strength, buckling strength and yield strength, as applicable.

49 *allowable load stress*

	ISO 14623:2003	2.3	TC20/SC14/WG1

69 allowable load (stress)
maximum load (stress) that can be accommodated by a material/structure without potential rupture, collapse or detrimental deformation in a given environment
NOTE Allowable loads (stresses) commonly correspond to the statistically based minimum ultimate strength, buckling strength, and yield strength, respectively.

50 *allowable strain*

	ISO 16454:2007	3.2	TC20/SC14/WG1

70 allowable load
allowable stress
allowable strain
maximum load (stress, strain) that can be accommodated by a material/structure without potential rupture, collapse or detrimental deformation in a given environment
NOTE Allowable loads (stresses, strains) commonly correspond to the statistically based minimum ultimate strength, buckling strength and yield strength, respectively.

	ISO 21648:2008	2.1.3	TC20/SC14/WG1

71 allowable load
allowable stress
allowable strain
maximum load that can be accommodated by a structure/material without rupture, collapse or detrimental deformation in a given environment
NOTE Allowable loads commonly correspond to the statistically-based minimum ultimate strength, buckling strength and yield strength, as applicable.

51 *allowable stress*

	ISO 16454:2007	3.2	TC20/SC14/WG1

72 allowable load
allowable stress
allowable strain
maximum load (stress, strain) that can be accommodated by a material/structure without potential rupture, collapse or detrimental deformation in a given environment
NOTE Allowable loads (stresses, strains) commonly correspond to the statistically based minimum ultimate strength, buckling strength and yield strength, respectively.

	ISO 21648:2008	2.1.3	TC20/SC14/WG1

73 allowable load
allowable stress
allowable strain
maximum load that can be accommodated by a structure/material without rupture, collapse or detrimental deformation in a given environment
NOTE Allowable loads commonly correspond to the statistically-based minimum ultimate strength, buckling strength and yield strength, as applicable.

52 *allowable stresses*

	ISO 14622:2000	2.8.2	TC20/SC14/WG1

74 2.8.2.1
σE
uniaxial yield stress corresponding to 0,2 % residual strain (metallic materials only)
2.8.2.2
σR
uniaxial ultimate strength stress
NOTE σR and σE have a statistical definition: they are equal to a value which has a 90 % probability of being exceeded, with a 95 % confidence level for unmanned space vehicles. In the case of manned space vehicles and/or launch vehicles values are 99 % and 95 % respectively.
NOTE 2 σR and σE correspond to the condition of the material when the structure is in service at the design temperature

53 *altitude test*

	ISO 17540:2016	2.32 Types of engine tests: Test conditions 2.32.1	TC20/SC14/WG2

75 engine firing test at high-altitude conditions

54 *AM0 standard solar cell*

	ISO 15387:2005	3.3	TC20/SC14/WG1

76 calibrated solar cell used to measure irradiance or to set simulator irradiance levels in terms of an air mass zero (AM0) reference solar spectral irradiance distribution

55 *ambient temperature*

Tamb	**ISO 15387:2005**	3.4	TC20/SC14/WG1

77 temperature of the air surrounding the solar cell as measured in a vented enclosure and shielded from solar, sky and ground radiation

56 *analysis*

	ISO 10795:2019	3.12	TC20/SC14/WG5

78 verification (3.244) method utilizing techniques and tools such as math models (3.155), compilation similarity assessments (3.24), validation (3.243) of records (3.194), etc., to confirm that verification requirements (3.201) have been satisfied

	ISO 17566:2011	2.1	TC20/SC14/WG2

79 verification method which entails performing a theoretical evaluation using accepted techniques
NOTE These techniques can include mathematics, statistics, qualitative design analysis, modelling and computer simulation.

57 *angle of incidence*

	ISO 15387:2005	3.5	TC20/SC14/WG1

80 angle between the direct irradiant beam and the normal to the active surface

58 *angular width of beam spread*

	ISO 10830:2011	3.13	TC20/SC14/WG6

81 angular range of a beam in which the echo of a flat-bottomed hole equivalent to the flaw to be detected appears at a height above the specified echo level in incident-angle scanning

59 *angularity*

	ISO 10788:2014	2.1.2	TC20/SC14/WG4

82 an expression of roundness
EXAMPLE A poorly rounded grain is described as angular.
Note 1 to entry: This definition has been taken from the Glossary of Geology (see Reference [5]).

60 *anneal*

	ISO 21980:2020	3.11	TC20/SC14/WG4

83 phenomenon in which the characteristics degraded by radiation recover due to heat

61 *anomaly*

	ISO 10795:2019	3.13	TC20/SC14/WG5

84 gap between a current situation and an expected one
Note 1 to entry: An anomaly justifies an investigation that can lead to the discovery of a nonconformance, a defect (3.79) or a “non-lieu” (deviation (3.86) without impact, e.g. product (3.173) peculiarity).
Note 2 to entry: A deviation may be declared, foreseen or requested.
Note 3 to entry: An anomaly is often detected in comparison with what seems to be standard or with the expected use.

62 *anti-pulsating partition*

	ISO 17540:2016	2.12 Chamber (gas generator) components 2.12.11	TC20/SC14/WG2

85 partition established in the combustion chamber (2.12.1) of the engine chamber or gas generator (2.2.4) for cross-section fluctuations suppression

63 *ap index*

ap	**ISO 16457:2014**	2.9	TC20/SC14/WG4

86 three-hour UT amplitude index of geomagnetic variation linearized equivalent to kp
NOTE The index scale is linear and expressed in numbers from 1 to 400.

64 *apparent attenuation-compensation rate*

	ISO 10830:2011	3.14	TC20/SC14/WG6

87 compensation for residual difference in echo height between the reference block and the test block
NOTE The apparent attenuation-compensation rate is applied after compensation of wave-front fluctuation by two-axis swivel scanning in the calibration of detection sensitivity. The difference is understood as the difference in properties between graphite ingot lots.

65 *applicable document*

	ISO 10795:2019	3.14	TC20/SC14/WG5

88 document (3.88) that contains provisions (3.181) which, through reference in the source document, incorporates additional provisions in the source document
Note 1 to entry: In this context, a provision is an expression that takes the form of a statement, an instruction, a recommendation or a requirement (3.201).

66 *application process*

	ISO 14950:2004	3.2.1	TC20/SC14/WG3

89 on-board element capable of generating telemetry source data and receiving telecommand data
NOTE An application process can be implemented in software, firmware, or hardware. There are no restrictions on the mapping between application processes and the usual functional subdivision of a spacecraft into subsystems and payloads. In a relatively simple spacecraft, there can be a centralized application process that provides a number of “dumb” platform subsystems and payloads with collection of housekeeping data, the distribution of device commands, onboard scheduling, on-board monitoring, etc. In a more complex spacecraft, each subsystem and payload might be served by its own independent application process. A given processor can host one or several application processes. However, it is also possible that a given application process could be distributed across two or more processors.

67 *applied load*

	ISO 14623:2003	2.4	TC20/SC14/WG1

90 applied load [stress]
actual load [stress] imposed on the structure in the service environment

	ISO 24638:2008	3.2	TC20/SC14/WG1

91 applied load
applied stress
actual load (stress) imposed on the hardware in the service environment

68 *applied stress*

	ISO 14623:2003	2.4	TC20/SC14/WG1

92 applied load [stress]
actual load [stress] imposed on the structure in the service environment

	ISO 24638:2008	3.2	TC20/SC14/WG1

93 applied load
applied stress
actual load (stress) imposed on the hardware in the service environment

69 *approval*

	ISO 10795:2019	3.15	TC20/SC14/WG5

94 formal agreement by a designated management (3.146) official to use or apply an item (3.134) or proceed with a proposed course of action (3.9)
Note 1 to entry: Approvals shall be documented.
Note 2 to entry: Approval implies that the approving authority has verified that the item conforms to its requirements (3.201).
[SOURCE: EN 16601-00-01:2015, 2.3.11]

70 *approving agent*

	ISO 24113:2019	3.1	TC20/SC14/WG7

95 entity from whom approval is sought for the implementation of space debris (3.23) mitigation requirements with respect to the procurement of a spacecraft (3.25), or its launch, or its operations in outer space, or its safe re-entry (3.22), or a combination of those activities
EXAMPLE Regulatory or licensing authorities; national or international space agencies; other delegated organizations.

71 *armed*

	ISO 26871:2012	3.1.3	TC20/SC14/WG1

96 condition that allows the probability of a wanted event to be above an agreed limit

72 *as-built configuration*

	ISO 10795:2019	3.16	TC20/SC14/WG5

97 configuration (3.50) of one product (3.173) item (3.134) identified by its gaps of conformity (3.60) with respect to its applicable configuration
Note 1 to entry: The relevant “as-designed configuration (3.19)” corresponds to the same “part number”.
Note 2 to entry: “As-built configuration” includes any impacts from technical events, anomalies, repairs (3.199), life potential consumption that occurred before the product delivery and any potential modifications (3.156) applied on the product but not embodied in the relevant design (3.82, 3.83) data file.

73 *as-built configuration list*

ABCL	**ISO 10795:2019**	3.17	TC20/SC14/WG5

98 reporting instrument defining the “as-built status” for each serial number of a configuration item (3.55) subject to formal acceptance (3.2, 3.3)
Note 1 to entry: The ABCL shall identify the “as-manufactured” and “as-tested” statuses applicable to a part comprising a configuration item.
Note 2 to entry: Using the configuration item data list (3.56) as a reference, any difference between the ABCL and the CIDL (3.56) shall be documented in the ABCL with reference to the applicable NCR and RFW (3.200).

74 *as-delivered configuration*

ISO 10795:2019 3.18 TC20/SC14/WG5

99 as-built configuration (3.16) at the time of delivery

75 *as-designed configuration*

ISO 10795:2019 3.19 TC20/SC14/WG5

100 current design (3.82, 3.83) status at any point of time providing the complete definition of a configuration item (3.55)
Note 1 to entry: The starting point of the “as-designed” configuration (3.50) with regard to the “as-planned” configuration is based on changes (3.39) the company has approved internally but has not yet incorporated in the design, and on changes already implemented but not yet approved in the “as-planned” configuration.

76 *as-ordered configuration*

ISO 10795:2019 3.20 TC20/SC14/WG5

101 as-ordered configuration
contractual configuration

configuration (3.50) of a product (3.173) configuration item (3.55), effectively given by its contractual approved changes (3.39) from the configuration baseline (3.51)
Note 1 to entry: At a given moment, a product may have several applicable configurations.

77 *aspect ratio*

ISO 10788:2014 2.1.3 TC20/SC14/WG4

102 ratio of the maximum Feret diameter divided into the orthogonal Feret diameter
Note 1 to entry: Values range from > 0 to 1 and equal to 1 for a circle.

78 *as-planned configuration*

ISO 10795:2019 3.21 TC20/SC14/WG5

103 planned to be built statement for each configuration item (3.55) unit (3.93) being delivered
Note 1 to entry: The as-planned configuration (3.50) is composed of the current configuration baseline (3.51) and any changes (3.39) that the company has approved internally but has not yet embodied in the current configuration baseline.

79 *as-qualified configuration*

ISO 10795:2019 3.22 TC20/SC14/WG5

104 as-built configuration (3.16) that was certified to have satisfactorily passed specified qualification tests (3.187)

80 *assembled article*

ISO 14624-3:2005 3.1 TC20/SC14/WG6

105 any component or assembly of components that is not a single material

81 *assembly*

ISO 10786:2011 3.5 TC20/SC14/WG1

106 combination of parts, components and units which forms a functional entity

ISO 10795:2019 3.23 TC20/SC14/WG5

107 combination of parts, components (3.48) and units (3.93) that form a functional entity
[SOURCE: ISO 10786:2011, 3.5, modified – The definition has been editorially revised.]

ISO 14952-1:2003 2.2 TC20/SC14/WG6

108 two or more parts (2.19) having a common mounting and being capable of performing a definite function

82 *assembly, repair and regulation instruction*

AI **ISO 26870:2009** 3.1 TC20/SC14/WG3

109 assembly, repair and regulation instruction
assembly, repair and regulation procedure

document containing detailed descriptions of the complex, system operations or tests required for assembly, repair and regulation

83 *assembly, repair and regulation procedure*

AI **ISO 26870:2009** 3.1 TC20/SC14/WG3

110 assembly, repair and regulation instruction
assembly, repair and regulation procedure

document containing detailed descriptions of the complex, system operations or tests required for assembly, repair and regulation

84 *assessment*

ISO 10795:2019 3.24 TC20/SC14/WG5

111 systematic process (3.171) of collecting and analysing data to determine the current status of a product (3.173), a process, a system (3.234), a person or an organization (3.163)

85 *assurance*

ISO 10795:2019 3.25 TC20/SC14/WG5

112 planned and systematic activities implemented, and demonstrated as needed, to provide adequate confidence that an entity fulfils its requirements (3.201)
[SOURCE: EN 16601-00-01:2015, 2.3.13]

86 *Astronomical Unit*

AU **ISO 15387:2005** 3.6 TC20/SC14/WG1

113 unit of length defined as the semi major axis of earth orbit
NOTE 1 AU = 149 597 890 km ± 500 km.

AU *ua* **ISO 21348:2007** 2.1 TC20/SC14/WG4

114 unit of length approximately equal to the mean distance between the Sun and the Earth with a currently accepted value of (149 597 870 691 ± 3) m
See References [1] and [2].
NOTE Distances between objects within the solar system are frequently expressed in terms of ua. The ua or AU is a non-SI unit accepted for use with the International System and whose value in SI units is obtained experimentally. Its value is such that, when used to describe the motion of bodies in the solar system, the heliocentric gravitation constant is (0,017 202 098 95)² ua³ d−², where one day (d) is 86 400 s (see Reference [3]).
1 AU is slightly less than the average distance between the Earth and the Sun, since an AU is based on the radius of a Keplerian circular orbit of a point-mass having an orbital period, in days, of 2 π/k, where k is the Gaussian gravitational constant and is (0,017 202 098 95 AU3 d−²)½. The most current published authoritative source for the value of 1 ua is from Reference [2].

87 *at-risk area*

ISO 16126:2014 3.1 TC20/SC14/WG7

115 area of those parts of a surface on a component that are most vulnerable to impacts from space debris ormeteoroids
Note 1 to entry: See A.I for a more detailed explanation of at-risk area.

88 *attenuation quotient*

$\Delta(R_0, Kp, T)$ **ISO 17520:2016** 2.16 TC20/SC14/WG4

116 determines how much the vertical cut-off rigidity value in a real geomagnetic field for a given Kp-index, at a local time T, decreased relative to values calculated with the IGRF model (R_0).
Note 1 to entry: Some of these terms are also defined in Reference [6].

89 *audit*

ISO 10795:2019 3.26 TC20/SC14/WG5

117 systematic, independent and documented process (3.171) for obtaining objective evidence and evaluating it objectively to determine the extent to which the audit criteria are fulfilled
Note 1 to entry: The fundamental elements of an audit include the determination of the conformity (3.60) of an object according to a procedure (3.170) carried out by personnel not being responsible for the object audited.
Note 2 to entry: An audit can be an internal audit (first party), or an external audit (second party or third party), and it can be a combined audit or a joint audit.
Note 3 to entry: Internal audits, sometimes called first-party audits, are conducted by, or on behalf of, the organization (3.163) itself for management (3.146) review (3.203) and other internal purposes, and can form the basis for an organization's declaration of conformity. Independence can be demonstrated by the freedom from responsibility for the activity being audited.
Note 4 to entry: External audits include those generally called second and third-party audits. Second party audits are conducted by parties having an interest in the organization, such as customers (3.78), or by other persons on their behalf. Third-party audits are conducted by external, independent auditing organizations such as those providing certification (3.37)/registration of conformity or governmental agencies.
Note 5 to entry: This constitutes one of the common terms and core definitions for ISO management system (3.147) standards (3.228) given in Annex SL of the Consolidated ISO Supplement to the ISO/IEC Directives, Part 1. The original definition and Notes to entry have been modified to remove effect of circularity between audit criteria and audit evidence term entries, and Notes 3 and 4 to entry have been added.
[SOURCE: ISO 9000:2015, 3.13.1]

90 *authorization*

	ISO 10795:2019	3.27	TC20/SC14/WG5

118 permission granted to an operator by a responsible authority to perform specified space activities
Note 1 to entry: Space activities include conducting space operations, conducting launch operations (3.137), operating one or more sites, and operating one or more space vehicles (3.225) on or from one or more launch sites.
[SOURCE: ISO 14620-2:2011, 3.2]

	ISO 14620-2:2019	3.1	TC20/SC14/WG5

119 permission granted to an operator (3.15) by a responsible authority (3.17) to perform specified space activities
Note 1 to entry: Space activities include conducting space operations, conducting launch (3.8) operations, operating one or more sites, and operating one or more space vehicles on or from one or more launch sites (3.11)

91 *autofrettage*

	ISO 14623:2003	2.5	TC20/SC14/WG1

120 vessel-sizing operation where pressure-driven deflection is used to plastically yield the metal liner into the overlying composite in order to induce initial compressive stress states in the metal liner

92 *auto-ignition temperature*

AIT	**ISO 22538-3:2007**	3.1.1	TC20/SC14/WG6

121 minimum temperature required to cause a material to ignite spontaneously without the application of a spark or flame in a pressurized oxygen-enriched environment

	ISO 22538-4:2007	3.1	TC20/SC14/WG6

122 temperature at which a material will spontaneously ignite in oxygen under specific test conditions

93 *automatic engine controller*

	ISO 17540:2016	2.2 Engine units 2.2.5	TC20/SC14/WG2

123 engine assembly designed for automatic control, regulation or maintenance of engine

94 *autonomous cooling*

	ISO 17540:2016	2.25 Engine cooling 2.25.3	TC20/SC14/WG2

124 engine one-through cooling where removed heat is not transmitted to propellant components

95 *autonomy*

	ISO 14950:2004	3.2.2	TC20/SC14/WG3

125 extent to which a spacecraft can handle nominal and/or contingency operations without ground intervention

96 *availability*

	ISO 10795:2019	3.28	TC20/SC14/WG5

126 ability of an item (3.134) to be in a state to perform a required function (3.110) under given conditions at a given instant of time or over a given time interval, assuming that the required external resources are provided
Note 1 to entry: This ability depends on the combined aspects of the reliability (3.198) performance (3.166), the maintainability (3.144) performance and the maintenance (3.145) support performance.
Note 2 to entry: Required external resources, other than maintenance resources, do not affect the availability performance of the item.
Note 3 to entry: When referring to the measure for availability, the preferred term is "instantaneous availability".
[SOURCE: ISO 16091:2018, 3.1.1]

	ISO 16091:2018	3.1.1	TC20/SC14/WG5

127 ability of an item to be in a state to perform a required function under given conditions at a given instant of time or over a given time interval, assuming that the required external resources are provided
Note 1 to entry: This ability depends on the combined aspects of the reliability performance, the maintainability performance and the maintenance support performance.
Note 2 to entry: Required external resources, other than maintenance resources, do not affect the availability performance of the item.
Note 3 to entry: In French, the term "disponibilité" is used to denote both the performance and the measure.

97 *A-value*

	ISO 10786:2011	3.1	TC20/SC14/WG1

128 A-basis allowable (preferred term)
A-basis design allowable (admitted term)
A-value (admitted term)

mechanical strength value above which at least 99 % of the population of values is expected to fall, with a confidence level of 95 %
[ISO 16454:2007]

98 *average mass flow of propellant*

	ISO 17540:2016	2.9 Low-thrust engine performance 2.9.19	TC20/SC14/WG2

129 ratio of the mass flow of propellant (fuel, oxidizer) LTE (2.1.3) for one inclusion (2.9.8) to the next

99 *average percent relative standard deviation*

	ISO 14624-3:2005	3.8	TC20/SC14/WG6

130 quotient of the standard deviations for each offgassed constituent of y replicate samples of a standard material and the total number of offgassed constituents
NOTE For actual samples, the expected test results and average relative standard deviations for the quantities of offgassed products are near 50 %. The calculations for standard deviation and average percent relative standard deviation are as follows:
The standard deviation, s, is given by:

$$s = \left(\left(\sum_{i=1}^{n}(x_i - \bar{x})^2\right)/(n-1)\right)^{1/2}$$

where $\bar{x}$ is the mean for an individual offgassed constituent.
Therefore, the calculation for the average percent relative standard deviation As, is given by:
As = (Σs)/y × 100 %
where
Σs is the summation of the standard deviations for each offgassed constituent;
y is the total number of offgassed constituents, for a standard material.

100 *average time of propellant being*

	ISO 17540:2016	2.14 Operating process in chamber (gas generator) 2.14.10	TC20/SC14/WG2

131 time interval defined by ratio of product weight in the combustion chamber (2.12.1) to the propellant mass flow by the chamber (2.2.1)

101 *axial unloading automat of turbine pump*

	ISO 17540:2016	2.19 Turbine pump components 2.20.7	TC20/SC14/WG2

132 booster turbine pump
device that unloads the turbine pump (booster turbine pump) bearings from axial forces by rotor automatic equilibration

102 *axisymmetric nozzle*

	ISO 17540:2016	2.15 Nozzle types 2.15.1	TC20/SC14/WG2

133 engine nozzle in which the surface, from the side where combustion products flow, is symmetric relative to its axis

103 *B/B0*

	ISO/TS 21979:2018	3.2	TC20/SC14/WG4

134 value normalized to the minimum value of the field line in the magnetic equator

104 *bakeout*

	ISO 15388:2012	3.1.1	TC20/SC14/WG6

135 activity of increasing the temperature of hardware to accelerate its outgassing rates with the intent of reducing the content of molecular contaminants within the hardware
NOTE Bakeout is usually performed in a vacuum environment but may be done in a controlled atmosphere.

105 *ballistic coefficient*

	ISO 16164:2015	3.1	TC20/SC14/WG3

136 product of the coefficient of drag and the average velocity-normal cross-sectional area divided by the mass (CdA/m)

106 *ballistic limit*

	ISO 16126:2014	3.2	TC20/SC14/WG7

137 impact-induced threshold of failure of a structure
Note 1 to- entry: A common failure threshold is the critical size of an impacting particle at which perforation occurs. However, depending on the characteristics of the item being hit, failure modes other than perforation are also possible.

107 *bandwidth*

	ISO 19924:2017	3.6	TC20/SC14/WG2

138 difference between the nominal upper and lower cut-off frequencies.

108 *baseline*

	ISO 10795:2019	3.31	TC20/SC14/WG5

139 set of information which describes exhaustively a situation at a given instant of time or over a given time interval Note 1 to entry: It is generally used as a reference for comparison with an analysis (3.12) of subsequent evolutions of the information.
[SOURCE: EN 16601-00-01:2015, 2.3.22]

109 *basic data*

	ISO 16454:2007	3.3	TC20/SC14/WG1

140 input data required to perform stress analysis and to determine margins of safety

110 *basic mass properties*

	ISO 22010:2007	3.1	TC20/SC14/WG1

141 best engineering estimate based on an assessment of the most recent baseline design, excluding mass growth allowance

111 *batch*

	ISO 22538-3:2007	3.1.2	TC20/SC14/WG6

142 batch
lot
collection of material that has all been made under the same conditions and at the same time, using the same starting materials

	ISO 26871:2012	3.1.25	TC20/SC14/WG1

143 lot
batch
group of components produced in homogeneous groups and under uniform conditions

112 *battery*

	ISO 17546:2016	3.4	TC20/SC14/WG1

144 two or more cells which are electrically connected together fitted with devices necessary for use, for example, case, terminals, marking and protective devices.
Note 1 to entry: A single cell battery is considered a “cell”. [6]
Note 2 to entry: A battery may also includes some or more attachments, such as electrical bypass devices, charge control electronics, heaters, temperature sensors, thermal switches, and thermal control elements. [1] [2]
Note 3 to entry: Units that are commonly referred to as "battery packs", "modules" or "battery assemblies" having the primary function of providing a source of power to another piece of equipment are, for the purposes of this International Standard, treated as batteries. [6]

[1] SMC standard SMC-S-017, ”LITHIUM-ION BATTERY FOR SPACECRAFT APPLICATIONS”
[2] NASA/TM-2009-2215751:NESC-RP-08-75/06-069-I, ”Guidelines on Lithium-ion Battery Use in Space Applications”
[6] ST/SG/AC. 10/11/Rev.5/Amend.1, “United Nations Transport of Dangerous Goods UN Manual of Tests and Criteria, Part III, sub-section 38.3 Fifth revised edition Amendment 1”

113 *B-basis allowable*

	ISO 10786:2011	3.6	TC20/SC14/WG1

145 B-basis allowable (preferred term)
B-basis design allowable (admitted term)
B-value (admitted term)

mechanical strength value above which at least 90 % of the population of values is expected to fall, with a confidence level of 95 %
[ISO 16454:2007]

	ISO 14623:2003	2.6	TC20/SC14/WG1

146 mechanical strength value above which at least 90 % of the population of values is expected to fall, with a confidence level of 95 %
cf. "A" basis allowable (2.1)

	ISO 16454:2007	3.4	TC20/SC14/WG1

147 mechanical strength value above which at least 90 % of the population of values is expected to fall, with a confidence level of 95 %

	ISO 21648:2008	2.1.4	TC20/SC14/WG1

148 mechanical strength value above which at least 90 % of the population of values is expected to fall, with a confidence level of 95 %
NOTE See also A-basis allowable (2.1.1).

	ISO 24638:2008	3.3	TC20/SC14/WG1

149 mechanical strength value above which at least 90 % of the population of values is expected to fall, with a confidence level of 95 %
NOTE See also A-basis allowable (3.1).

114 *B-basis design allowable*

ISO 10786:2011	3.6	TC20/SC14/WG1

150 B-basis allowable (preferred term)
B-basis design allowable (admitted term)
B-value (admitted term)

mechanical strength value above which at least 90 % of the population of values is expected to fall, with a confidence level of 95 %
[ISO 16454:2007]

115 *beam-index scanning*

ISO 10830:2011	3.1	TC20/SC14/WG6

151 common scanning method in which a probe (beam index) traverses the test surface of the test block
NOTE Either R-X scanning or R-Z scanning is conducted, depending on the test surface.

116 *bellows*

ISO 10785:2011	3.2	TC20/SC14/WG1

152 corrugated single-layer or multi-layer elastic casing, when integrated into a duct assembly, capable of performing linear, shear and angular movements
NOTE 1 A bellows consists of both a convolution section and a mechanical linkage section, which serves as a bellows restraint. The most common mechanical linkage types are gimbal-type and braided-type. In some cases a bellows contains an internal liner or flow tube for the purpose of improving flow capability.
NOTE 2 See Figure 1.

117 *bellows stiffness*

ISO 10785:2011	3.3	TC20/SC14/WG1

153 ratio between an applied force and the resulting bellows displacement

118 *benchmark*

ISO/TS 18667:2018	3.1.1	TC20/SC14/WG5

154 any standard or reference by which others can be measured

119 *best practice*

ISO 14621-1:2019	3.1.1	TC20/SC14/WG5

155 documented process or product developed by the user community, consisting of suppliers and customers, teaming for the purpose of establishing industry guidelines

120 *best technical practice*

ISO/TS 18667:2018	3.1.2	TC20/SC14/WG5

156 documented technique, method, procedure, or process based on a standard or guide, that was developed through experience and research, and is being used as a benchmark by multiple organizations to efficiently obtain prescribed results with consistent quality and to measure against

121 *between-flights control*

	ISO 17540:2016	2.45 Engine quality control 2.45.2	TC20/SC14/WG2

157 turnaround control
control of a reusable engine before regular intended use

122 *bioaerosol*

	ISO 15388:2012	3.1.2	TC20/SC14/WG6

158 dispersed biological agents (e.g. viable particles, allergens, toxins or biologically active compounds of microbial origin) in a gaseous environment

123 *biocontamination*

	ISO 15388:2012	3.1.3	TC20/SC14/WG6

159 contamination of materials, devices, individuals, surfaces, liquids, gases or air with viable particles

124 *blank*

	ISO 14952-1:2003	2.3	TC20/SC14/WG6

160 result for an analytical sample of the virgin test fluid (2.11) prior to use in performing a cleanliness verification (2.34) test

125 *blow-off*

	ISO 11221:2011	2.2	TC20/SC14/WG4

161 emission of negative charges into space due to an electrostatic discharge

126 *book-keeping method*

	ISO 23339:2010	3.1	TC20/SC14/WG3

162 method for determining fluid consumption by monitoring flow rates and the duration of propellant expenditure periods

127 *booster turbine*

	ISO 17540:2016	2.19 Turbine pump components 2.20.4	TC20/SC14/WG2

163 gas or hydraulic turbine intended for pump drive of booster turbine pump

128 *booster turbine pump*

	ISO 17540:2016	2.19 Turbine pump components 2.20.7	TC20/SC14/WG2

164 axial unloading automat of turbine pump
device that unloads the turbine pump (booster turbine pump) bearings from axial forces by rotor automatic equilibration

129 *booster turbo-pump*

BTP **ISO 17540:2016** 2.2 Engine units 2.2.3 TC20/SC14/WG2

165 turbo-pump (2.2.2) engine support designed to increase propellant pressure in the pipelines to pump (2.20.1)

130 *brake radiation*

ISO 15856:2010 3.1.3 TC20/SC14/WG4

166 bremsstrahlung
brake radiation
photon radiation, continuously distributed in energy up to the energy of the incident particle radiation, emitted from a material due to deceleration of incident particle radiation within the material, mainly due to electrons

131 *breadboard*

ISO 10795:2019 3.29 TC20/SC14/WG5

167 physical model (3.155) designed to test functionality and tailored to the demonstration need
[SOURCE: ISO 16290:2013, 2.1]

ISO 16290:2013 2.1 TC20/SC14/WG5

168 physical model (2.10) designed to test functionality and tailored to the demonstration need

132 *break between engine inclusions*

ISO 17540:2016 2.10 Engine operation modes 2.10.10 TC20/SC14/WG2

169 time interval from the engine stop multiple power-up to the first team for the subsequent inclusion (2.9.8)

133 *breakdown structure*

ISO 10795:2019 3.30 TC20/SC14/WG5

170 framework for efficiently controlling some aspect of the activities of a programme (3.177) or project (3.178)
[SOURCE: ISO 27026:2011, 3.1.1]

ISO 27026:2011 3.1.1 TC20/SC14/WG5

171 framework for efficiently controlling some aspect of the activities of a programme or project

134 *break-out box*

ISO 14302:2002 3.1.1 TC20/SC14/WG1

172 non-flight piece of test support equipment that is connected in-line with a cable that accommodates external connection (usually binding posts) of instrumentation or series/parallel test networks to the wiring in that cable

135 *break-up*

ISO 24113:2019 3.2 TC20/SC14/WG7

173 event that completely or partially destroys an object and generates space debris (3.23)

136 *break-up probability*

ISO 16127:2014	3.2	TC20/SC14/WG7

174 combined probability of the occurrence of all anomalous events, excluding meteoroid or debris impact, that leads to the generation of orbital debris

137 *bremsstrahlung*

ISO 15856:2010	3.1.3	TC20/SC14/WG4

175 bremsstrahlung
brake radiation
photon radiation, continuously distributed in energy up to the energy of the incident particle radiation, emitted from a material due to deceleration of incident particle radiation within the material, mainly due to electrons

ISO 21980:2020	3.8	TC20/SC14/WG4

176 photon radiation, continuously distributed in energy up to the energy of the incident particle radiation, emitted from a material due to deceleration of incident particle radiation within the material, mainly due to electrons
Note 1 to entry: Bremsstrahlung is any radiation produced due to the deceleration (negative acceleration) of a charged particle, which includes synchrotron radiation (i.e. photon emission by a relativistic particle), cyclotron radiation (i.e. photon emission by a non-relativistic particle), and the emission of electrons and positrons during beta decay. The term is frequently used in the narrower sense of radiation from relativistic electrons (from whatever source) slowing as they penetrate matter.
[SOURCE: ISO 15856: 2010, 3.1.3 — The alternative term "brake radiation" has been removed; Note 1 to entry has been added.]

138 *brittle fracture*

ISO 14623:2003	2.7	TC20/SC14/WG1

177 catastrophic failure mode in a material/structure that usually occurs without prior plastic deformation and at extremely high speed
NOTE The fracture is usually characterized by a flat fracture surface with little or no shear lips (slant fracture surface) and at average stress levels below those of general yielding.

139 *brittle material*

ISO 11227:2012	3.1.1	TC20/SC14/WG7

178 material that breaks due to a propagation defect under the action of a stress

140 *broadband reverberant field*

ISO 19924:2017	3.20	TC20/SC14/WG2

179 includes signals over a relative large frequency range of 22,5 Hz ~ 10 000 Hz (1/3 oct)

141 *buckling*

ISO 10786:2011	3.7	TC20/SC14/WG1

180 failure mode in which an infinitesimal increase in the load could lead to sudden collapse or detrimental deformation of a structure
EXAMPLE Snapping of slender beams, columns, struts and thin-wall shells.

142 *bulging stress*

	ISO 10785:2011	3.5	TC20/SC14/WG1

181 meridional or axial stress at the convolution section induced by pressure

143 *bulk properties*

	ISO 15856:2010	3.1.19	TC20/SC14/WG4

182 volume properties
bulk properties
properties that are determined by characteristics averaged through the volume of a product

144 *burn length*

	ISO 14624-1:2003	3.1	TC20/SC14/WG6

183 distance from the bottom of the specimen to the farthest evidence of damage to the test specimen due to flame impingement
NOTE This distance includes areas of partial or complete combustion, charring or embrittlement, but does not include areas which are sooted, stained, warped or discoloured, or areas where the material has shrunk or melted away from the heat.

	ISO 14624-2:2003	4.1	TC20/SC14/WG6

184 maximum distance over which the insulation has been damaged due to flame impingement
NOTE This distance includes areas of partial or complete combustion, charring or embrittlement, but does not include areas which are sooted, stained, warped or discoloured, or areas where the insulation has shrunk or melted away from the heat.

	ISO 14624-4:2003	3.1	TC20/SC14/WG6

185 length of specimen that has been consumed by combustion
NOTE The burn length is determined by subtracting the post-test specimen length from the pre-test specimen length.

145 *burn propagation time*

	ISO 14624-1:2003	3.2	TC20/SC14/WG6

186 time that elapses from ignition of the specimen until vertical flame propagation stops

146 *burst factor*

	ISO 14623:2003	2.8	TC20/SC14/WG1

187 multiplying factor applied to the maximum expected operating pressure (MEOP), or maximum design pressure (MDP), to obtain the design burst pressure
NOTE 1 Burst factor is synonymous with design factor of safety for burst.
NOTE 2 design burst pressure (2.16) sometimes referred to as burst pressure, is synonymous with "ultimate pressure".

147 *burst pressure*

	ISO 10785:2011	3.4	TC20/SC14/WG1

188 pressure level at which rupture or unstable fracture of the pressurized hardware item occurs

	ISO 14623:2003	2.16	TC20/SC14/WG1

189 design burst pressure (preferred term)
burst pressure (admitted term)
“ultimate pressure” (admitted term)

differential pressure that pressurized hardware must withstand without burst in the applicable operational environment
NOTE Design burst pressure is equal to the product of the MEOP or MDP and a design burst factor.

	ISO 24638:2008	3.8	TC20/SC14/WG1

190 design burst pressure (preferred term)
burst pressure (admitted term)
ultimate pressure (admitted term)

differential pressure that pressurized hardware needs to withstand without burst in the applicable operational environment
NOTE Design burst pressure is equal to the product of the maximum expected operating pressure or maximum design pressure and a design burst factor.

148 *burst strength after impact*

BAI	ISO 14623:2003	2.9	TC20/SC14/WG1

191 actual burst pressure of a composite overwrapped pressure vessel after it has been subjected to an impact event

BAI	ISO 21347:2005	3.1	TC20/SC14/WG1

192 actual burst pressure of a pressure vessel after it has been subjected to an impact event

149 *business agreement*

	ISO 10795:2019	3.32	TC20/SC14/WG5

193 legally binding agreement, for the supply of goods or services, between two or more actors in the customer-supplier chain
Note 1 to entry: Business agreements are recorded in a variety of forms, such as
– contracts,
– memoranda of understanding,
– inter-governmental agreements,
– inter-agency agreements,
– partnerships,
– bartering agreements,
– purchase orders.
[SOURCE: EN 16601-00-01:2015, 2.3.25]

	ISO 27025:2010	3.1.1	TC20/SC14/WG5

194 agreement between two or more parties for the supply of goods or services

150 *B-value*

	ISO 10786:2011	3.6	TC20/SC14/WG1

195 B-basis allowable (preferred term)
B-basis design allowable (admitted term)
B-value (admitted term)

mechanical strength value above which at least 90 % of the population of values is expected to fall, with a confidence level of 95 %
[ISO 16454:2007]

151 *calculated properties*

	ISO 22010:2007	3.2	TC20/SC14/WG1

196 mass properties determined from released drawings or controlled computer models

152 *calculated thermal flux*

	ISO 14622:2000	2.7.1	TC20/SC14/WG1

197 heat flux evaluated in the most unfavourable heat exchange condition.
NOTE See 3.2.5

153 *calendar loss*

	ISO 17546:2016	3.5	TC20/SC14/WG1

198 degradation of electrical performances due to passage of time after activation

154 *calibration*

	ISO 10795:2019	3.33	TC20/SC14/WG5

199 all operations for the purpose of determining the values of the errors (3.94) and, if necessary, other metrological properties of a measuring instrument

	ISO 20930:2018	3.1	TC20/SC14/WG1

200 set of operations that establish, under specified conditions, the relationship between sets of values of quantities indicated by a measuring instrument or measuring system and the corresponding values realized by standards

155 *capability*

	ISO/TS 18667:2018	3.1.3	TC20/SC14/WG5

201 ability to achieve a desired effect under specified standards and conditions

156 *capability level growth*

	ISO/TS 18667:2018	3.1.6	TC20/SC14/WG5

202 measurable improvement in the ability of a SD&QA programme or process to support the system safety
and mission success needs of a systems engineering process
EXAMPLE An increase in resources, scope of effort, or maturity of input data.

157 *Capability-based Safety, Dependability and Quality Assurance (SD&QA) Process*

	ISO/TS 18667:2018	3.1.5	TC20/SC14/WG5

203 individual process that consists of a group of activities which are capable of efficiently identifying,
assessing, and mitigating or controlling specified types of technical risks
Note 1 to entry: The list of capability levels is as follows:
- Capability Level 1 process is the minimum set or "base" activities that constitute an appropriate process for a low unit-value/criticality product;
- Capability Level 2 process includes all the Capability Level 1 activities plus additional activities for documenting a procedure, and expanding the comprehensiveness and accuracy of the process to address risks associated with a medium unit-value/criticality product.
- Capability Level 3 process includes all the Capability Level 1 and 2 activities plus additional activities for developing a database, reviewing lessons learned, verifying products and processes, and exchanging SD&QA data throughout the Systems Engineering Process.
- Capability Level 4 process includes all the Capability Level 1, 2 and 3 activities plus additional activities for generating lessons learned, improving the process, and standardizing the formats of mpirical and analytical input data used for assessments.
- Capability Level 5 process includes all the Capability Level 1, 2, 3 and 4 activities plus additional activities for continuous improvement of the process.

158 *Capability-based Safety, Dependability and Quality Assurance (SD&QA) Programme*

	ISO/TS 18667:2018	3.1.4	TC20/SC14/WG5

204 programme for space and ground control systems that consists of three groups of processes; the Safety programme; the Dependability Programme; and the Quality Assurance Programme, which are pre-tailored to efficiently identify, assess, and eliminate or mitigate specific types of technical risks throughout the product's mission duration and post-mission disposal

159 *capacitive cooling*

	ISO 17540:2016	2.25 Engine cooling 2.25.8	TC20/SC14/WG2

205 prevention of engine design element overheating through heat absorption by a material without its mass entrapment

160 *capacity for work parameter*

	ISO 17540:2016	2.43 Analysis of engine technical status 2.43.1	TC20/SC14/WG2

206 engine parameter used for its reliability analysis for the purpose of identifying which one of its properties definition provides its operable state (2.39.2)

161 *carrier*

	ISO 15389:2001	3.1	TC20/SC14/WG3

207 device that groups coupling and connector halves together to provide a common means for their positioning, retention, unlocking, and separation
NOTE The term is commonly used in relation to the facility ground-side of umbilical interfaces.

162 *cartridge*

	ISO 26871:2012	3.1.4	TC20/SC14/WG1

208 explosive device designed to produce pressure for performing a mechanical function
NOTE A cartridge is called an initiator if it is the first or only explosive element in an explosive train.

163 *casualty risk*

	ISO 24113:2019	3.3	TC20/SC14/WG7

209 casualty risk
expected number of casualties

situation expressed by the probability that at least one person is killed or seriously injured as a consequence of an event
Note 1 to entry: The medical profession has defined a number of different injury scoring systems to distinguish the severity of an injury. Broadly, a serious injury is one of such severity that hospitalisation is required.
Note 2 to entry: The re-entry (3.22) of a spacecraft (3.25) is an example of an event.

164 *catalytic engine*

	ISO 17540:2016	2.6 Low-thrust engine types by way of work process 2.6.1	TC20/SC14/WG2

210 LTE (2.1.3) where the transformation of propellant into gaseous chemical reaction products is performed with the help of a catalyst

165 *catastrophic*

	ISO 10795:2019	3.34	TC20/SC14/WG5

211 capable of causing death or major system (3.234) destruction

166 *catastrophic collision*

	ISO 16126:2014	3.3	TC20/SC14/WG7

212 collision leading to the destruction by fragmentation of a spacecraft

167 *catastrophic failure*

	ISO 10786:2011	3.8	TC20/SC14/WG1

213 failure which results in the loss of human life, mission or a major ground facility, or long-term detrimental environmental effects

	ISO 21648:2008	2.1.5	TC20/SC14/WG1

214 structural failure event due to the rotor separation, or the rupture or collapse, of other flywheel rotor assembly components or assembly

	ISO 26871:2012	3.1.5	TC20/SC14/WG1

215 failure resulting in loss of life, loss of mission or loss of launch capability

168 *catastrophic hazard*

	ISO 21347:2005	3.2	TC20/SC14/WG1

216 potential risk situation that can result in loss of life, life-threatening or permanently disabling injury, occupational illness, loss of an element of an interfacing manned flight system, loss of launch site facilities, or long-term detriment to the environment

169 *Cause*

	ISO 10795:2019	3.35	TC20/SC14/WG5

217 circumstance, condition, event or action (3.9) that produces an effect or gives rise to any action, phenomenon or condition
Note 1 to entry: Cause and effect are correlative terms (Oxford English Dictionary).
Note 2 to entry: Specific to this document, cause, when used in the context of hazard analysis (3.121), is the action or condition by which a hazardous event (3.122) is initiated (an initiating event). The cause can arise as the result of failure (3.98), human error (3.94), design (3.82, 3.83) inadequacy, induced or natural environment (3.92), system (3.234) configuration (3.50) or operational mode(s).

	ISO 14620-1:2018	3.1.2	TC20/SC14/WG5

218 action or condition by which a hazardous event is initiated (an initiating event)
Note 1 to entry: The cause can arise as the result of failure, human error, design inadequacy, induced or natural environment, system configuration or operational mode(s).
Note 2 to entry: This definition is specific to this document, when used in the context of hazard analysis.

170 *caution condition*

	ISO 10795:2019	3.36	TC20/SC14/WG5

219 condition which has the potential to degrade into a warning condition, and which might require specific action (3.9), including the implementation of special procedures (3.170) or restrictions on the operation of the system (3.234)
[SOURCE: ISO 14620-1:2018, 3.1.3]

	ISO 14620-1:2018	3.1.3	TC20/SC14/WG5

220 condition which has the potential to degrade into a warning condition, and which might require specific action, including the implementation of special procedures or restrictions on the operation of the system

171 *cell*

	ISO 17546:2016	3.6	TC20/SC14/WG1

221 single encased electrochemical unit (one positive and one negative electrode) which exhibits a voltage differential across its two terminals.[6]

[6] ST/SG/AC. 10/11/Rev.5/Amend.1, “United Nations Transport of Dangerous Goods UN Manual of Tests and Criteria, Part III, sub-section 38.3 Fifth revised edition Amendment 1”

172 *cell temperature*

	ISO 15387:2005	3.7	TC20/SC14/WG1
Tj			

222 cell temperature as one of ambient air in absence of cell illumination or under short duration light pulse (flash)
NOTE Tj is not very different from the temperature of the cell exposed face.

173 *centre frequency*

	ISO 19924:2017	3.7	TC20/SC14/WG2

223 geometric mean of the nominal cut-off frequencies of a pass-band
Note 1 to entry: The definition of octave (3.12) and third-octave bands preferred centre frequency values refers to ISO 266.

174 *centrifugal injector*

	ISO 17540:2016	2.12 Chamber (gas generator) components 2.12.9	TC20/SC14/WG2

224 engine injector whereby liquid or gas escape in the form of a veil generated as result of liquid or gas rotating in a vortex chamber

175 *Certificate of conformity*

	ISO 10795:2019	3.38	TC20/SC14/WG5

225 documented information that attests to product (3.173) conformity (3.60), conformance to defined process (3.171), design (3.82, 3.83), and specification (3.227) requirements (3.201)

176 *certification*

	ISO 10795:2019	3.37	TC20/SC14/WG5

226 procedure (3.170) by which a party gives formal assurance that a person or an organization (3.163) acts, or a product (3.173) is, in compliance with specified requirements (3.201)
Note 1 to entry: Certification can be carried out by a first, second or third party.
[SOURCE: EN 16601-00-01:2015, 2.3.29]

177 *chain*

	ISO 14950:2004	3.2.3	TC20/SC14/WG3

227 set of hardware and/or software units that operate together to achieve a given function
EXAMPLE An attitude and orbit-control-subsystem (AOCS) processor and its software and a set of AOCS sensors and actuators together constitute an AOCS chain.

178 *chamber*

	ISO 17540:2016	2.2 Engine units 2.2.1	TC20/SC14/WG2

228 engine assembly where propellant and/or gas generation products, as a result of chemical reactions, are converted into products of combustion, created at the expiration of the reactive force

179 *chamber coefficient*

	ISO 17540:2016	2.7 General parameters and performance of engine 2.7.26	TC20/SC14/WG2

229 ratio of the real characteristic velocity in the chamber (2.2.1) to the ideal defined by the same values of the mixture ratio (2.7.5) and the combustion chamber pressure

180 *chamber gas generator case*

	ISO 17540:2016	2.12 Chamber (gas generator) components 2.12.12	TC20/SC14/WG2

230 wall of engine chamber (gas generator) without mixing system (2.12.4)

181 *chamber gas generator cooling tract*

	ISO 17540:2016	2.12 Chamber (gas generator) components 2.12.13	TC20/SC14/WG2

231 set of channels in the case and chamber (gas generator) mixing system with one-through (2.25.2) (direct-flow) or transpiration cooling (2.25.7)

182 *change*

	ISO 10795:2019	3.39	TC20/SC14/WG5

232 official numerically issued alterations to a document (3.88) or any portion thereof, usually brought about by changed conditions or more complete information
Note 1 to entry: Such correction (3.67) may consist of requiring re-issuance and reprinting of the entire document, or an instruction to replace several pages with a later publication page. However, such documents must be revised.
Note 2 to entry: “Class 1” (“major” for deviation (3.86)) are changes that impact the contractual/technical agreement reached between the contractor (3.66) and the customer (3.78). It is necessary that such changes be submitted to the customer for review (3.203) and approval (3.15) before implementation.
Note 3 to entry: “Class 2” (“minor” for deviation) are changes that do not impact the customer contract (3.65) and that are necessary for the project (3.178) and its supply chain to meet the technical/contractual requirements (3.201) and provisions (3.181). Such changes can be implemented after configuration control board (CCB) approval.
[SOURCE: ISO 21886:2019, 3.7, modified – Note 1 to entry has been added; in Note 2 and 3 to entry, the words "for deviation" has been added.]

	ISO 21886:2019	3.7	TC20/SC14/WG5

233 official numerically issued alterations to a document or any portion thereof, usually brought about by changed conditions or more complete information
Note 1 to entry: “Class 1” (Major) are changes that impact the contractual/technical agreement reached between the project and its customer. It is necessary that such changes be submitted to the customer for review and approval before implementation.
Note 2 to entry: “Class 2” (Minor) are changes that do not impact the customer contract and that are necessary for the project and its supply chain to meet the technical/contractual requirements and provisions. Such changes can be implemented after configuration control board (CCB) approval.

183 *change control*

	ISO 21886:2019	3.6	TC20/SC14/WG5

234 activity for controlling the changes or deviation/waiver to the product after the formal approval of its configuration baseline (3.5)

184 *change request*

	ISO 10795:2019	3.40	TC20/SC14/WG5

235 document (3.88) containing a call for a change (3.39) of a requirement (3.201) of a product (3.173) or process (3.171)
Note 1 to entry: It is of great importance in the change management (3.146) process.
Note 2 to entry: A change request is declarative (i.e. it states what it is necessary to accomplish) but leaves out how the change should be carried out.

185 *characteristic*

	ISO 10795:2019	3.41	TC20/SC14/WG5

236 distinguishing feature
Note 1 to entry: A characteristic can be inherent or assigned.
Note 2 to entry: A characteristic can be qualitative or quantitative.
Note 3 to entry: There are various classes of characteristic, such as the following:
a) physical (e.g. mechanical, electrical, chemical or biological characteristics);
b) sensory (e.g. related to smell, touch, taste, sight, hearing);
c) behavioural (e.g. courtesy, honesty, veracity);
d) temporal (e.g. punctuality, reliability (3.198), availability (3.28), continuity);
e) ergonomic (e.g. physiological characteristic, or related to human safety (3.210));
f) functional (e.g. maximum speed of an aircraft).
[SOURCE: ISO 9000:2015, 3.10.1]

	ISO 17566:2011	2.2	TC20/SC14/WG2

237 distinguishing feature

186 *characteristic of high product heritage*

	ISO 21350:2007	3.3	TC20/SC14/WG5

238 item from the original supplier that has maintained the great majority of the original service, design, performance and manufacturing characteristics

187 *characteristic of low product heritage*

	ISO 21350:2007	3.4	TC20/SC14/WG5

239 item that was not build by the original manufacturer, does not have a significant history of successful test and usage, or has had significant aspects of the original service, design performance and manufacturing characteristics altered

188 *characteristic velocity*

	ISO 17540:2016	2.7 General parameters and performance of engine 2.7.27	TC20/SC14/WG2

240 product of the nozzle stagnation pressure and nozzle throat area, referred to the mass consumption of propellant chamber

189 *charge*

	ISO 26871:2012	3.1.6	TC20/SC14/WG1

241 explosive loaded in a cartridge, detonator or separate container for use in a explosive device

190 *classification*

ISO 15388:2012 3.1.4 TC20/SC14/WG6

242 ⟨airborne particle concentrations⟩ level (or process of specifying or determining the level) of airborne particulate cleanliness, expressed in terms of an ISO Class N, which represents maximum allowable concentrations for the particle size considered
NOTE 1 Concentrations are measured in particles per cubic metre.
NOTE 2 The concentrations are determined as specified in ISO 14644-1.

191 *clean bench*

ISO 15388:2012 3.1.5 TC20/SC14/WG6

243 table or bench-top working surface where a filtered airflow is concentrated across the bench top
NOTE These bench tops have an established classification of maximum allowable airborne contaminants.

192 *clean hood*

ISO 15388:2012 3.1.6 TC20/SC14/WG6

244 work area with a workbench, overhead dust deflector and sideboards, and a self-contained filtering unit for airflow to the work area
NOTE These hoods have an established classification of maximum allowable airborne contaminants.

193 *clean room*

ISO 10795:2019 3.42 TC20/SC14/WG5

245 clean area controlled according to specified levels
Note 1 to entry: Levels specified include humidity, temperature, particulates number versus size and volume and chemical contamination (3.62).

194 *clean zone*

ISO 15388:2012 3.1.11 TC20/SC14/WG6

246 dedicated space in which the concentration of airborne particles is controlled, and which is constructed and used in such a manner as to minimize the introduction, generation, and retention of particles inside the zone and in which other relevant parameters such as temperature, humidity and pressure are controlled as necessary
NOTE The clean zone may be open or enclosed and may or may not be located within a cleanroom.

195 *cleanliness level*

ISO 15388:2012 3.1.7 TC20/SC14/WG6

247 established maximum allowable amount of contamination in a given area or volume, or on a component
NOTE The term may also apply to the predicted or measured extent of contamination.

196 *cleanliness requirement specification*

CRS **ISO 15388:2012** 3.1.8 TC20/SC14/WG6

248 document that defines and identifies the spacecraft items and the environmental areas which are sensitive to contamination, the acceptable contamination levels at beginning and end of life and the applicable contamination environment

197 *cleanroom*

	ISO 15388:2012	3.1.9	TC20/SC14/WG6

249 room in which the concentration of airborne particles is controlled, and which is constructed and used in such a manner as to minimize the introduction, generation and retention of particles inside the room, and in which other relevant parameters such as temperature, humidity and pressure are controlled as necessary

198 *cleanroom garments*

	ISO 15388:2012	3.1.10	TC20/SC14/WG6

250 clothing designed, manufactured and worn specifically to prevent contamination of hardware by personnel working in the cleanroom
NOTE Cleanroom garments include all items worn by personnel, such as coveralls, frocks, gloves, boots, finger cots and beard covers.

199 *closed-loop control*

	ISO 19924:2017	3.15	TC20/SC14/WG2

251 closed-loop control
feedback control

system where the output acts upon the process in such a way as to reduce the difference between the
measured value and the desired set-point value to zero
[SOURCE: ISO 16484-2:2004, 3.41]

200 *clustered engine*

	ISO 17540:2016	2.1 General 2.1.5	TC20/SC14/WG2

252 liquid rocket propulsion system (2.1.4) consisting of multiple rocket engines (2.1.1), common propellant tanks, and autonomous (independent) propellant feed systems

201 *coating*

	ISO 16691:2014	3.1.2	TC20/SC14/WG6

253 continuous layer formed from a single or multiple application of a coating material to a substrate
[SOURCE: ISO 4618:2006]

202 *coating material*

	ISO 16691:2014	3.1.3	TC20/SC14/WG6

254 product in liquid, paste, or powder form, that, when applied to a substrate, forms a film possessing protective and/or other specific properties
[SOURCE: ISO 4618:2006]

203 *coating process*

	ISO 16691:2014	3.1.4	TC20/SC14/WG6

255 process of application of a coating material to a substrate, such as dipping, spraying, roller coating, brushing
[SOURCE: ISO 4618:2006]

204 *coating system*

	ISO 16691:2014	3.1.5	TC20/SC14/WG6

256 combination of all coats of coating materials which are to be applied or which have been applied to a substrate
[SOURCE: ISO 4618:2006]

205 *coefficient of consumable complex*

	ISO 17540:2016	2.7 General parameters and performance of engine 2.7.23	TC20/SC14/WG2

257 ratio of the actual spending of the complex chamber rocket engine to the ideal that defined the same values of the ratio components fuel pressure in the chamber (2.2.1)

206 *coefficient of fill cycle operation*

	ISO 17540:2016	2.9 Low-thrust engine performance 2.9.14	TC20/SC14/WG2

258 inclusion relation of LTE (2.1.3) to switching cycles

207 *coefficient of flow*

	ISO 17540:2016	2.7 General parameters and performance of engine 2.7.24	TC20/SC14/WG2

259 coefficient of nozzle flow
coefficient of flow
ratio of the actual flow of gas through the rocket engine nozzle to the theoretical value, as defined under the same temperature and total pressure in the nozzle throat, under the conditions for the gas constant and the local adiabatic exponent

208 *coefficient of nozzle flow*

	ISO 17540:2016	2.7 General parameters and performance of engine 2.7.24	TC20/SC14/WG2

260 coefficient of nozzle flow
coefficient of flow

ratio of the actual flow of gas through the rocket engine nozzle to the theoretical value, as defined under the same temperature and total pressure in the nozzle throat, under the conditions for the gas constant and the local adiabatic exponent

209 *coefficient of specific impulse*

	ISO 17540:2016	2.7 General parameters and performance of engine 2.7.19	TC20/SC14/WG2

261 ratio of actual specific impulse to the theoretical value that is defined by the same values of mixture ratio (2.7.5), the nozzle stagnation pressure or chamber total pressure at nozzle inlet

210 *coefficient of test conditions forcing*

	ISO 17540:2016	2.46 Structural and functional analysis of reliability 2.46.4	TC20/SC14/WG2

262 ratio of engine failure possibility at forcing tests to its failure possibility at normal test

211 *cognizant authority*

	ISO 14625:2007	3.1.1	TC20/SC14/WG3

263 organization that is recognized as having expertise in one or more technical disciplines
EXAMPLE ISO, IEC.

212 *cold test*

	ISO 17540:2016	2.28 Types of engine tests: Thermal loads 2.28.2	TC20/SC14/WG2

264 engine test (2.27.1) without fuel combustion or decomposition

213 *collapse*

	ISO 10786:2011	3.9	TC20/SC14/WG1

265 failure mode induced by quasi-static loads (compression, shear or combined stress) accompanied by irreversible loss of load-carrying capability

	ISO 16454:2007	3.5	TC20/SC14/WG1

266 failure mode induced by quasi-static compression, shear or combined stress, accompanied by very rapid irreversible loss of load resistance capability

214 *collected volatile condensable material*

CVCM	**ISO 15388:2012**	3.1.12	TC20/SC14/WG6

267 mass that outgasses from a material and subsequently condenses on a collector, expressed as a percentage of the initial specimen mass

215 *collision*

	ISO/TR 16158:2013	3.2	TC20/SC14/WG3

268 act of colliding; an instance of one object striking another

216 *collisionless plasma*

	ISO 11221:2011	2.3	TC20/SC14/WG4

269 plasma in which the mean free paths of electron-neutral, ion-neutral and coulomb collisions are longer than the scale length of interest
NOTE Chamber length is an example of a scale length of interest.

217 *combined loading case*

	ISO 10786:2011	3.31	TC20/SC14/WG1

270 loading case (preferred term)
combined loading case (admitted term)

particular condition of single (or combined) mechanical load, pressure and temperature, which can occur for some structural components or a structural assembly at the same time during their service life

218 *Combustion Chamber*

	ISO 17540:2016	2.12 Chamber (gas generator) components 2.12.1, 2.12.2	TC20/SC14/WG2

271 <for chamber> part of the chamber (2.2.1) between the internal bottom of the mixing system (2.12.3) and the initial section of the nozzle (2.12.16), which is intended for mixture generation (2.14.3) and propellant combustion

<for gas generator> part of the gas generator (2.2.4) intended for mixture generation (2.14.4) and propellant components transformation into gas generation products

219 *combustion temperature*

	ISO 17540:2016	2.7 General parameters and performance of engine 2.7.9, 2.7.10	TC20/SC14/WG2

272 <in chamber> stagnation temperature of combustion products at the exit from the combustion chamber (2.12.1)

<in gas generator> stagnation temperature of gas generation at the exit from the gas generator (2.2.4)

220 *commandability*

	ISO 14950:2004	3.1.1	TC20/SC14/WG3

273 ability of the ground to safely control and configure all the equipment and software on-board the spacecraft as required for the execution of the nominal mission, for failure identification and recovery, for performance assessment and for system maintenance subsequent to performance change and system degradation

221 *commercial satellite*

	ISO 20188:2018	3.1	TC20/SC14/WG5

274 satellite used for private business
Note 1 to entry: Non-commercial satellite is military satellite or civil satellite developed on behalf of government organization, space agency and/or research organization.

222 *Commercial-Off-The-Shelf*

COTS	**ISO 14625:2007**	3.1.2	TC20/SC14/WG3

275 equipment, including hardware and associated software/procedures, that is commercially available from current industry inventory

223 *commissioning*

ISO 10784-1:2011	3.1.1	TC20/SC14/WG2

276 certification of a spacecraft as ready for mission operations

ISO 10784-2:2011	3.1.1	TC20/SC14/WG2

277 certification of a spacecraft as ready for mission operations

ISO 10784-3:2011	3.1.1	TC20/SC14/WG2

278 certification of a spacecraft as ready for mission operations

ISO 10795:2019	3.43	TC20/SC14/WG5

279 certification (3.37) of a spacecraft (3.224) as ready for mission (3.154) operations
[SOURCE: ISO 10784-1:2011, 3.1.1]

224 *common cause failure*

ISO 14620-1:2018	3.1.4	TC20/SC14/WG5

280 failure of multiple items occurring from a single cause which is common to all of them
[SOURCE: Adapted from NUREG/CR-2300 PRA: 1982]

225 *common mode failure*

ISO 14620-1:2018	3.1.5	TC20/SC14/WG5

281 failure of multiple identical items that fail in the same mode
Note 1 to entry: Common mode failures are a particular case of common cause failures.
[SOURCE: NUREG/CR-2300 PRA: 1982]

226 *common-cause failure*

ISO 10795:2019	3.44	TC20/SC14/WG5

282 failure (3.98) of multiple items (3.134) occurring from a single cause (3.35) which is common to all of them
[SOURCE: ISO 14620-1:2018, 3.1.4]

227 *common-mode failure*

ISO 10795:2019	3.45	TC20/SC14/WG5

283 failure (3.98) of multiple identical items (3.134) that fail in the same mode
Note 1 to entry: Common mode failures are a particular case of common-cause failures (3.44).
[SOURCE: ISO 14620-1:2018, 3.1.5]

228 *common-mode fault*

	ISO 10795:2019	3.46	TC20/SC14/WG5

284 fault (3.101, 3.102) of multiple items (3.134) that exhibit the same fault mode

229 *compatibility*

	ISO 14950:2004	3.1.2	TC20/SC14/WG3

285 extent to which the design of the space segment conforms with the existing ground segment infrastructure (if any) and with existing operational practices

230 *compensation magnet*

	ISO 21494:2019	3.19	TC20/SC14/WG2

286 permanent magnet used for magnetic compensation

231 *competence*

	ISO 10795:2019	3.47	TC20/SC14/WG5

287 demonstrated ability to apply knowledge and skills
Note 1 to entry: Technical competence is defined by the know-how, such as working practices, special skills (“tours de main”), mastery of technology, etc.
Note 2 to entry: Cognitive competence is knowledge, such as specific fundamental knowledge, scientific “capital”, expertise in a domain, history, etc.
Note 3 to entry: Methodological competence is defined by the working methods, such as problem solving, manner of decision.
Note 4 to entry: Experimental competence is the experience related to relations with different interlocutors (e.g. customer (3.78) relations), to participation, to events, to “personal” actions (3.9), etc.
[SOURCE: ISO 9000:2015, 3.10.4, modified – “[...]to achieve intended results” has been removed from definition; Notes 1 and 2 to entry had been replaced with new ones; Notes to entry 3 and 4 have been added.]

232 *complete space system*

	ISO 14302:2002	3.1.2	TC20/SC14/WG1

288 normally the spacecraft or launch vehicle itself, but more generally a suite of equipment, subsystems, skills, and techniques capable of performing or supporting an operational rote
NOTE A complete system includes related facilities, equipment, subsystems, materials, services, and personnel required for its operation to the degree that it can be considered self-sufficient within its operational or support environment.

233 *completing development test*

	ISO 17540:2016	2.34 Types of engine tests: Test purposes 2.34.3	TC20/SC14/WG2

289 engine development test of the final design for the purpose of confirming its performance to technical specification requirements and providing for acceptance test possibility

234 *complex*

	ISO 16159:2012	2.1	TC20/SC14/WG3

290 launch pad or integration site
[ISO 26870:2009, definition 3.2]

	ISO 26870:2009	3.2	TC20/SC14/WG3

291 launch pad or integration site

235 *component*

	ISO 10785:2011	3.6	TC20/SC14/WG1

292 functional unit that is viewed as an entity for the purpose of analysis, manufacturing, maintenance, or record keeping
NOTE Adapted from ISO 14623:2003.

	ISO 10795:2019	3.48	TC20/SC14/WG5

293 component
part

set of materials (3.148), assembled according to defined and controlled processes (3.171), which cannot be disassembled without destroying its capability and which performs a simple function (3.110) that can be evaluated against expected performance (3.166) requirements (3.201)
[SOURCE: EN 16601-00-01:2015, 2.3.37, modified – NOTE 1 and 2 have been removed.]

	ISO 14623:2003	2.10	TC20/SC14/WG1

294 functional unit that is viewed as an entity for purpose of analysis, manufacturing, maintenance, or record keeping

	ISO 14952-1:2003	2.4	TC20/SC14/WG6

295 article that is normally a combination of parts (2.19) or assemblies (2.2) and is a self-contained element within complete operating equipment

	ISO 24638:2008	3.4	TC20/SC14/WG1

296 functional unit that is viewed as an entity for the purpose of analysis, manufacturing, maintenance, or record keeping

	ISO 26871:2012	3.1.7	TC20/SC14/WG1

297 smallest functional item in a explosive subsystem

236 *Composite Material*

	ISO 10786:2011	3.10	TC20/SC14/WG1

298 combination of materials different in composition or form on a macro scale
NOTE 1 The constituents retain their identities in the composite.
NOTE 2 The constituents can normally be physically identified, and there is an interface between them.
[ISO 16454:2007]
EXAMPLE Composites include
- fibrous (composed of fibres, usually in a matrix),
- laminar (layers of materials), and
- hybrid (combination of fibrous and laminar).

	ISO 16454:2007	3.6	TC20/SC14/WG1

299 combination of materials different in composition or form on a macro scale
NOTE 1 The constituents retain their identities in the composite.
NOTE 2 The constituents can normally be physically identified, and there is an interface between them.

	ISO 21347:2005	3.3	TC20/SC14/WG1

300 combination of materials which differ in composition or form on a macro scale
NOTE The constituents may retain their identities in the composite. Normally, the constituents can be physically identified, and there is an interface between them. A bonded structure such as metallic honeycomb sandwich is not considered as a composite structure in this International Standard.

	ISO 21648:2008	2.1.6	TC20/SC14/WG1

301 combination of materials which differ in composition or form on a macro-scale
NOTE The constituents retain their identities in the composite, i.e. they do not dissolve or otherwise merge completely into each other, although they act in concert. Normally, the composites can be physically identified and exhibit an interface between one another.

237 *composite overwrapped pressure vessel*

COPV	**ISO 10786:2011**	3.11	TC20/SC14/WG1

302 pressure vessel with a fibre-based composite system fully or partially encapsulating a liner
NOTE The liner serves as a liquid or gas permeation barrier and may or may not carry substantial pressure loads.
The composite overwraps generally carry pressure and environmental loads.
[ISO 14623:2003]

	ISO 14623:2003	2.11	TC20/SC14/WG1

303 pressure vessel with a fibre-based composite system fully or partially encapsulating a liner
NOTE The liner serves as a fluid permeation barrier and may or may not carry substantial pressure loads. The composite overwraps generally carry pressure and environmental loads

238 *composite structure*

	ISO 10786:2011	3.12	TC20/SC14/WG1

304 structural components that are made of composite materials

239 *composite-overwrapped pressure vessel*

COPV	**ISO 21347:2005**	3.4	TC20/SC14/WG1

305 pressure vessel with a fibre-based composite system fully or partially encapsulating a liner
NOTE 1 The COPV containing a metallic liner is referred to as a metal-lined COPV while the COPV containing a nonmetallic liner is referred to as a nonmetal-lined COPV.
NOTE 2 The liner serves as a fluid permeation barrier and may or may not carry substantial pressure and external loads. The composite overwraps generally carry pressure and environmental loads.

240 *compressed gas feed system*

	ISO 17540:2016	2.49 Stand systems 2.49.2	TC20/SC14/WG2

306 gas supply system
stand system (2.47.5) intended for the engine and stand facilities compressed gas supply

241 concession

	ISO 10795:2019	3.49	TC20/SC14/WG5

307 permission to use or release a product (3.173) or service that does not conform to specified requirements (3.201)
Note 1 to entry: A concession is generally limited to the delivery of products and services that have nonconforming characteristics (3.41) within specified limits and is generally given for a limited quantity of products and services or period of time, and for a specific use.
[SOURCE: ISO 9000:2015, 3.12.5]

242 conclusive test result

	ISO 17540:2016	2.38 Test results 2.38.1	TC20/SC14/WG2

308 test result on the basis of which conclusions can be drawn about engine technical condition, suitable for its reliability or quality analysis

243 condensable hydrocarbon

	ISO 14952-1:2003	2.5	TC20/SC14/WG6

309 hydrocarbon (2.14) capable of going from a gaseous to a liquid or solid state at ambient temperature and pressure

244 conditional rated thrust

	ISO 17540:2016	2.9 Low-thrust engine performance 2.9.7	TC20/SC14/WG2

310 rated thrust of LTE (2.1.3) in a vacuum at an initial temperature of 288 K where structures and the geometric expansion ratio of the nozzle is equal to 50

245 confidence level

	ISO 12208:2015	2.1	TC20/SC14/WG4

311 level used to indicate the reliability of a cumulative fluence estimation

246 configuration

	ISO 10795:2019	3.50	TC20/SC14/WG5

312 interrelated functional and physical characteristics (3.41) of a product (3.173) or service defined in product configuration (3.50) information
[SOURCE: ISO 9000:2015, 3.10.6]

	ISO 16091:2018	3.1.2	TC20/SC14/WG5

313 interrelated functional and physical characteristics of a product or service defined in configuration management
[SOURCE: ISO 10007:2017, modified — definition previously stated “...defined in configuration information”]

	ISO 21886:2019	3.1	TC20/SC14/WG5

314 interrelated functional and physical characteristics of a product or service defined in configuration information

247 configuration baseline

ISO 10795:2019 3.51 TC20/SC14/WG5

315 approved product (3.173) configuration (3.50) information that establishes the characteristics (3.41) of a product or service at a point in time that serves as reference for activities throughout the life cycle (3.141) of the product or service
[SOURCE: ISO 9000:2015, 3.10.7]

ISO 21886:2019 3.5 TC20/SC14/WG5

316 approved status of requirements and design of a product at a project key milestone that serves as the reference for activities throughout the life cycle of the product

248 configuration control

ISO 10795:2019 3.52 TC20/SC14/WG5

317 coordinated activities for controlling modifications (3.156) to a configuration baseline (3.51)
Note 1 to entry: Request for deviations (3.86) are also considered modifications to a configuration baseline.
[SOURCE: EN 16601-00-01:2015, 2.3.41]

249 configuration document

ISO 10795:2019 3.53 TC20/SC14/WG5

318 document (3.88) that defines the requirements (3.201) for the function (3.110), design (3.82, 3.83), build, production, and verification (3.244) for a configuration item (3.55)
Note 1 to entry: For space systems, configuration documents can include documents relating to the operation and disposal of the configuration item.
[SOURCE: ISO 21886:2019, 3.4]

ISO 21886:2019 3.4 TC20/SC14/WG5

319 document that defines the requirements for the function, design, build, production and verification for a configuration item (3.3)
Note 1 to entry: For space systems, configuration documents can include documents relating to the operation and disposal of the configuration item.

250 configuration identification

ISO 10795:2019 3.54 TC20/SC14/WG5

320 coordinated activities to establish rules for configuration item (3.55) selection, configuration baseline (3.51) content definition, and product (3.173) and document (3.88) identifiers definition
[SOURCE: EN 16601-00-01:2015, 2.3.43]

251 configuration item

ISO 10795:2019 3.55 TC20/SC14/WG5

321 entity within a configuration (3.50) that satisfies an end use function (3.110)
[SOURCE: ISO 10007:2017, 3.3]

ISO 21886:2019 3.3 TC20/SC14/WG5

322 aggregation of hardware, software, processed materials, services or any of its discrete portions, that is designated for configuration management and treated as a single entity in the configuration management (3.2) process
Note 1 to entry: A configuration item can contain other configuration item(s).

252 *configuration item data list*

CIDL	**ISO 10795:2019**	3.56	TC20/SC14/WG5

323 document (3.88) generated from the central configuration (3.50) database giving the current design (3.82, 3.83) status of a configuration item (3.55) at a given point of time in sufficient detail and/or providing its complete definition
Note 1 to entry: A CIDL includes the list of applicable changes (3.39) not yet incorporated into the baseline (3.31) documentation (3.89) and deviations (3.86).

253 *configuration management*

ISO 10795:2019	3.57	TC20/SC14/WG5

324 activity for establishing and maintaining consistent records (3.194) of the status of and changes (3.39) to the performance (3.166) parameters of a product (3.173) and its functional and physical attributes compared to product design (3.82, 3.83) and operational requirements (3.201)
Note 1 to entry: Configuration management is applied throughout the entire life cycle (3.141) of the product (3.173) (i.e. development (3.85), production, deployment, operation and disposal).

ISO 21886:2019	3.2	TC20/SC14/WG5

325 activity for establishing and maintaining consistent records of the status of and changes to the performance parameters of a product and its functional and physical attributes compared to the product design and operational requirements
Note 1 to entry: Configuration management is applied throughout the entire life of the product (i.e. development, production, deployment, operation and disposal).

254 *configuration status accounting*

ISO 10795:2019	3.58	TC20/SC14/WG5

326 formalized recording and reporting of configuration (3.50) information, the status of proposed changes (3.39) and the status of the implementation of approved changes
[SOURCE: ISO 10007:2017, 3.4]

255 *configuration verification*

ISO 10795:2019	3.59	TC20/SC14/WG5

327 coordinated activities to determine the conformity (3.60) of the configuration item (3.55) to its configuration document(s) (3.53)
[SOURCE: EN 16601-00-01:2015, 2.3.47]

256 *conformity*

ISO 10795:2019	3.60	TC20/SC14/WG5

328 fulfilment of a requirement (3.201)
Note 1 to entry: In English the word “conformance” is synonymous but deprecated. In French the word “compliance” is synonymous but deprecated.
Note 2 to entry: This constitutes one of the common terms and core definitions for ISO management system (3.147) standards (3.228) given in Annex SL of the Consolidated ISO Supplement to the ISO/IEC Directives, Part 1. The original definition has been modified by adding Note 1 to entry.
[SOURCE: ISO 9000:2015, 3.6.11]

257 *conical nozzle*

	ISO 17540:2016	2.15 Nozzle types 2.15.3	TC20/SC14/WG2

329 round nozzle (2.15.2) in which the expanding part from the similar to the nominal section has a rectilinear contour

258 *conjunction*

	ISO/TR 16158:2013	3.1	TC20/SC14/WG3

330 apparent meeting or passing of two or more objects in space

259 *connector*

	ISO 15389:2001	3.2	TC20/SC14/WG3

331 device, consisting of two halves, that permits engagement and disengagement of electrical circuits at an interface

260 *constraint*

	ISO 10795:2019	3.61	TC20/SC14/WG5

332 characteristic (3.41), result or design (3.82, 3.83) feature which is made compulsory or has been prohibited for any reason
Note 1 to entry: Constraints are generally restrictions on the choice of solutions in a system (3.234).
Note 2 to entry: Two kinds of constraints are considered, those which concern solutions, and those which concern the use of the system.
Note 3 to entry: For example constraints can come from environmental and operational conditions, law, standards (3.228), market demand, investments and means availability (3.28), or the organization's (3.163) policy.
[SOURCE: ISO 21351:2005, 3.1.1, modified – NOTE 4 has been removed.]

	ISO 21351:2005	3.1.1	TC20/SC14/WG5

333 characteristic, result or design feature which is made compulsory or has been prohibited for any reason
NOTE 1 Constraints are generally restrictions on the choice of solutions in a system.
NOTE 2 Two kinds of constraints are considered, those which concern solutions, and those which concern the use of the system.
NOTE 3 For example constraints can come from environmental and operational conditions, law, standards, market demand, investments and means availability, or the organization's policy.
NOTE 4 Adapted from EN 1325-1.

261 *consumable complex*

	ISO 17540:2016	2.7 General parameters and performance of engine 2.7.21	TC20/SC14/WG2

334 consumable complex of chamber
consumable complex

product of the combustion pressure in a given section of the chamber (2.2.1) to a nozzle throat area, referred to the mass flow of the propellant in chamber
Note 1 to entry: Given section of the chamber (2.2.1) is in analysis of camera characteristics stability during serial production [initial section of combustion chamber (2.12.1) at (near) mixing system (2.12.3)] and in analysis of multiphase flows (2.19.4) [initial section of nozzle 2.12.16)].

262 *consumable complex of chamber*

ISO 17540:2016 2.7 General parameters and performance of engine 2.7.21 TC20/SC14/WG2

335 consumable complex of chamber
consumable complex

product of the combustion pressure in a given section of the chamber (2.2.1) to a nozzle throat area, referred to the mass flow of the propellant in chamber
Note 1 to entry: Given section of the chamber (2.2.1) is in analysis of camera characteristics stability during serial production [initial section of combustion chamber (2.12.1) at (near) mixing system (2.12.3)] and in analysis of multiphase flows (2.19.4) [initial section of nozzle 2.12.16)].

263 *contaminant*

ISO 15388:2012 3.1.13 TC20/SC14/WG6

336 unwanted molecular or particulate matter that could affect or degrade the relevant performance or lifetime of the hardware to which it is attached

264 *contaminate*

ISO 15388:2012 3.1.14 TC20/SC14/WG6

337 introduce a contaminant

265 *contamination*

ISO 10795:2019 3.62 TC20/SC14/WG5

338 introduction of any undesirable molecular or particulate matter (including microbiological matter) into an item (3.134) or into the environment (3.92) of interest

ISO 15388:2012 3.1.15 TC20/SC14/WG6

339 addition of contaminants to materials, fluids or surfaces

266 *contamination analysis document*

ISO 15388:2012 3.1.17 TC20/SC14/WG6

340 report of the analyses and results that are used to determine cleanliness requirements and contamination profiles and budgets

267 *contamination and cleanliness control plan*

CCCP **ISO 15388:2012** 3.1.18 TC20/SC14/WG6

341 document that describes how to implement a contamination and cleanliness control programme, as either an independent document or a part of the consolidated project plan

268 *contamination and cleanliness control programme*

ISO 15388:2012 3.1.16 TC20/SC14/WG6

342 organized effort to establish and achieve acceptable cleanliness and contamination levels during all phases of the space system project

269 ***contamination budget***

ISO 15388:2012	3.1.19	TC20/SC14/WG6

343 allowable levels of contamination of hardware at each phase of ground and flight operations

270 ***contamination profile***

ISO 15388:2012	3.1.20	TC20/SC14/WG6

344 contamination-related conditions in each phase of ground and flight operations
NOTE 1 Conditions include airborne particulate cleanliness classes, pressure, humidity, temperature, number of personnel engaged in operations, cleaning activities, outlines of facilities and so on.
NOTE 2 The contamination profile is part of the CCCP.

271 ***contingency procedure***

ISO 10795:2019	3.63	TC20/SC14/WG5

345 pre-planned procedure (3.170) for execution in response to a departure from specified behavior

272 ***continual improvement***

ISO 10795:2019	3.64	TC20/SC14/WG5

346 recurring activity to enhance performance (3.166)
Note 1 to entry: The process (3.171) of establishing objectives and finding opportunities for improvement is a continual process through the use of audit (3.26) findings and audit conclusions, analysis (3.12) of data, management (3.146) reviews (3.203) or other means and generally leads to corrective action (3.68) or preventive action (3.169).
Note 2 to entry: This constitutes one of the common terms and core definitions for ISO management system (3.147) standards (3.228) given in Annex SL of the Consolidated ISO Supplement to the ISO/IEC Directives, Part 1. The original definition has been modified by adding Note 1 to entry.
[SOURCE: ISO 9000:2015, 3.3.2]

273 ***continuous operation mode***

ISO 17540:2016	2.11 Low-thrust engine operation modes 2.11.1	TC20/SC14/WG2

347 LTE operation mode of one firing with the specific impulse value constant in time

274 ***contract***

ISO 10795:2019	3.65	TC20/SC14/WG5

348 legally enforceable business agreement (3.32) in which payment is part of the conditions
[SOURCE: EN 16601-00-01:2015, 2.3.52]

275 ***contractor***

ISO 10795:2019	3.66	TC20/SC14/WG5

349 supplier (3.232) in a contractual situation

276 ***contractor limit***

	ISO 22010:2007	3.3	TC20/SC14/WG1

350 predicted mass plus a contractor margin to allow for uncertainties during the design cycle

277 *contractor margin*

	ISO 22010:2007	3.4	TC20/SC14/WG1

351 contractor margin/system margin
difference between the contractor limit and the predicted mass

278 *contractor margin/system margin*

	ISO 22010:2007	3.4	TC20/SC14/WG1

352 difference between the contractor limit and the predicted mass

279 *contractual configuration*

	ISO 10795:2019	3.20	TC20/SC14/WG5

353 as-ordered configuration
contractual configuration

configuration (3.50) of a product (3.173) configuration item (3.55), effectively given by its contractual approved changes (3.39) from the configuration baseline (3.51)
Note 1 to entry: At a given moment, a product may have several applicable configurations.

280 *control actuator*

	ISO 17540:2016	2.24 Devices and methods of control efforts creation in engines 2.24.4	TC20/SC14/WG2

354 engine actuator that controls the position of devices creating control efforts

281 *control chamber*

	ISO 17540:2016	2.24 Devices and methods of control efforts creation in engines 2.24.1	TC20/SC14/WG2

355 auxiliary chamber used for control efforts creation

282 *control engine*

	ISO 17540:2016	2.5 Engine types by purpose 2.5.3	TC20/SC14/WG2

356 engine intended to control the correction of the vector of the space vehicle in the active phase of the trajectory of motion

283 control loop

	ISO 14950:2004	3.2.4	TC20/SC14/WG3

357 mechanisms to maintain a parameter or a set of parameters within prescribed limits
NOTE A control loop normally consists of a set of measurements and responses (commands) related according to a function, algorithm, or set of rules.

284 control nozzle

	ISO 17540:2016	2.24 Devices and methods of control efforts creation in engines 2.24.2	TC20/SC14/WG2

358 auxiliary nozzle used for control efforts creation

285 control plan

	ISO 17540:2016	2.45 Engine quality control 2.45.3	TC20/SC14/WG2

359 plan that includes control type and structure, testing engine number, test periodicity and conditions, and decision rules

286 control point

	ISO 19924:2017	3.10	TC20/SC14/WG2

360 measurement points (3.9), spatially distributed inside the reverberant chamber, whose signals are used for the sound pressure level test control

287 control sequence procedure

	ISO 17540:2016	2.49 Stand systems 2.49.4	TC20/SC14/WG2

361 test procedure intended for the sequential control of the engine and stand system actuator devices

288 Control System

	ISO 16781:2013	2.2	TC20/SC14/WG1

362 closed-loop configuration of sensors, processors/algorithms and actuators designed to manage the dynamic behavior of space systems

289 control system switching equipment compartment

	ISO 17540:2016	2.52 Stand compartmen ts 2.52.9	TC20/SC14/WG2

363 bench building designed to placing switching equipment of control system

290 controllable magnetic field

	ISO 21494:2019	3.9	TC20/SC14/WG2

364 magnitude of magnetic field within a certain volume that is controlled by adjusting electric current of a typical main coil system such as a Helmholtz coil or Braunbeck coil system

291 *controlled re-entry*

	ISO 16699:2015	3.4	TC20/SC14/WG3

365 manoeuvring a space system in a controlled manner into a targeted re-entry with a well-defined impact footprint on the surface of the Earth to limit the possibility of human casualty
Note 1 to entry: This generally means that the object will re-enter the Earth's atmosphere less than one orbit revolution from the time of initiation of the final deorbit manoeuvre.

	ISO 24113:2019	3.4	TC20/SC14/WG7

366 type of re-entry (3.22) where the time of re-entry is sufficiently controlled so that the impact of any surviving debris on the surface of the Earth is confined to a designated area
Note 1 to entry: The designated area is usually an uninhabited region such as an ocean.

	ISO 27875:2019	3.1	TC20/SC14/WG3

367 type of re-entry where the time of re-entry is sufficiently controlled so that the impact of any surviving debris on the surface of the Earth is confined to a designated area
Note 1 to entry: The designated area is usually an uninhabited region such as an ocean.

292 *conversion efficiency*

	ISO 15387:2005	3.9	TC20/SC14/WG1

368 ratio of “maximum electrical power output” to the product of generator area and incident irradiance measured under defined test conditions and expressed as a percentage

293 *correction*

	ISO 10795:2019	3.67	TC20/SC14/WG5

369 action (3.9) to eliminate a detected nonconformity (3.157)
Note 1 to entry: A correction can be made in advance of, in conjunction with or after a corrective action (3.68).
Note 2 to entry: A correction can be, for example, rework (3.205) or regrade.
[SOURCE: ISO 9000:2015, 3.12.3]

294 *correction engine*

	ISO 17540:2016	2.5 Engine types by purpose 2.5.2	TC20/SC14/WG2

370 engine intended to correct the speed during the correction of trajectory of the space vehicle

295 *corrective action*

	ISO 10795:2019	3.68	TC20/SC14/WG5

371 action (3.9) to eliminate the cause (3.35) of a nonconformity (3.157) and to prevent recurrence
Note 1 to entry: There can be more than one cause for a nonconformity.
Note 2 to entry: Corrective action is taken to prevent recurrence whereas preventive action (3.169) is taken to prevent occurrence.
Note 3 to entry: This constitutes one of the common terms and core definitions for ISO management system (3.147) standards (3.228) given in Annex SL of the Consolidated ISO Supplement to the ISO/IEC Directives, Part 1. The original definition has been modified by adding Notes 1 and 2 to entry.
[SOURCE: ISO 9000:2015, 3.12.2]

296 *cost breakdown structure*

	ISO 10795:2019	3.69	TC20/SC14/WG5

372 hierarchical structure that depicts elements of cost

297 *Counterfeit part*

	ISO 10795:2019	3.70	TC20/SC14/WG5

373 unauthorized copy, imitation, substitute, or modified part (e. g., material (3.148), part, component (3.48)), which is knowingly misrepresented as a specified genuine part of an original or authorized manufacturer
Note 1 to entry: Examples of a counterfeit part can include, but are not limited to, the false identification of marking or labelling, grade, serial number, date code, documentation (3.89), or performance (3.166) characteristics (3.41).
[SOURCE: EN 9100:2016, modified – The article “an” has been removed from the definition for consistency with ISO/IEC Directives Part 2, 2018 edition.]

298 *coupling*

	ISO 15389:2001	3.3	TC20/SC14/WG3

374 device, consisting of two halves, that permits transfer of fluid across and disconnection at an interface

299 *coupling efficiency*

	ISO 20780:2018	3.1.8	TC20/SC14/WG1

375 efficiency of optical power transfer between an optical component and its fibre pigtail

300 *covariance*

	ISO/TR 16158:2013	3.3	TC20/SC14/WG3

376 measure of how much variables change together
Note to entry: For multiple dependent variables, a square, symmetric, positive definite matrix of dimensionality N x N, where N is the number of variables.

301 *creep*

	ISO 16454:2007	3.7	TC20/SC14/WG1

377 process of a permanent material deformation resulting from long duration under constant or slowly altered load
NOTE The ultimate creep deformation, corresponding to the loss of material integrity is often much larger than ultimate deformation in the case of short time loading.

302 *critical*

	ISO 10795:2019	3.71, 3.72	TC20/SC14/WG5

378 <general> characteristic (3.41) of a process (3.171), process condition, parameter, requirement (3.201) or item (3.134) that deserves control and special attention in order to meet the objectives (e.g. of a mission (3.154)) within given constraints (3.61)
[SOURCE: EN 16601-00-01:2015, 2.3.55]

<safety> resulting in temporarily disabling but not life-threatening injury, temporary occupational illness, major detrimental environmental effects, major damage to public or private properties, major damage to interfacing flight systems (3.234) or major damage to ground facilities
[SOURCE: EN 16601-00-01:2015, 2.3.56]

303 *critical application*

	ISO 21350:2007	3.1	TC20/SC14/WG5

379 any application where a failure could cause loss of life or loss of mission

304 *critical characteristic*

	ISO 10795:2019	3.73	TC20/SC14/WG5

380 physical attribute of an article or material (3.148) that, if defective, can cause loss of life or equipment (3.93), or make the article or material non-functional

	ISO 19826:2017	3.1	TC20/SC14/WG5

381 kind of characteristic whose fault would cause failure of the whole system or major subsystem to perform a required mission or create serious harm to the safety of humans

305 *critical component*

	ISO 16126:2014	3.4	TC20/SC14/WG7

382 component whose failure would prevent the completion of an essential function on a spacecraft, such as post-mission disposal

306 *critical condition*

	ISO 10785:2011	3.7	TC20/SC14/WG1

383 most severe environmental condition in terms of loads, deflection, pressures and temperatures, or combination thereof, imposed on systems, subsystems, structures and components during service life
[ISO 14623:2003, definition 2.12]

	ISO 14623:2003	2.12	TC20/SC14/WG1

384 most severe environmental condition in terms of loads, pressures and temperatures or combination thereof imposed on systems, subsystems, structures and components during service life

	ISO 16454:2007	3.8	TC20/SC14/WG1

385 most severe environmental condition in terms of load and temperature, or combination thereof, imposed on a structure, system, subsystem or component during service life

	ISO 24638:2008	3.5	TC20/SC14/WG1

386 most severe environmental condition in terms of loads, pressures and temperatures, or combinations thereof, imposed on systems, subsystems, structures and components during service life

307 *critical design review*

CDR	**ISO 10795:2019**	3.74	TC20/SC14/WG5

387 review (3.203) performed prior to fabrication of prototype and after completion of the critical (3.71, 3.72) design (3.82, 3.83) Note 1 to entry: In the review, drawing specifications (3.227) and test (3.239) result of the engineering model (3.155) are evaluated to confirm that the result of the critical design satisfies the requirements (3.201) of the contracts (3.65) and technical specifications (3.238) to allow proceeding with prototype production phase.

308 *critical fault*

	ISO 14620-1:2018	3.1.6	TC20/SC14/WG5

388 fault which is assessed as likely to result in injury to persons, significant material damage, or other unacceptable consequences
[SOURCE: IEC 60050:1992]

309 *critical flaw*

	ISO 14623:2003	2.13	TC20/SC14/WG1

389 specific shape of flaw with sufficient size such that unstable growth will occur under the specific operating load and environment

	ISO 21347:2005	3.5	TC20/SC14/WG1

390 specific shape of flaw with sufficient size such that unstable growth will occur under the specific operating load and environment

310 *critical function of an element*

	ISO 16290:2013	2.2	TC20/SC14/WG5

391 mandatory function which requires specific technology (2.19) verification
Note 1 to entry: This situation occurs when either the element or components of the element are new and cannot be assessed by relying on previous realizations, or when the element is used in a new domain, such as new environmental conditions or a new specific use not previously demonstrated.
Note 2 to entry: Wherever used in this International Standard, “critical function” always refers to “technology critical function” and should not be confused with “safety critical function”.
Note 3 to entry: Wherever used in this International Standard, “critical function” always refers to “critical function of an element"

311 *critical hazard*

	ISO 10795:2019	3.75	TC20/SC14/WG5

392 potential risk (3.206) situation that can result in temporarily disabling but not life-threatening injury, or temporary occupational illness; loss of, or major damage to, flight systems (3.234), major flight system elements or ground facilities; loss of, or major damage to, public or private property, or shortterm detrimental environmental effects
[SOURCE: ISO 21347:2005, 3.6]

	ISO 21347:2005	3.6	TC20/SC14/WG1

393 potential risk situation that can result in temporarily disabling but not life-threatening injury, or temporary occupational illness; loss of, or major damage to, flight systems, major flight system elements or ground facilities; loss of, or major damage to, public or private property, or short-term detrimental environmental effects

312 *critical item*

	ISO 10795:2019	3.76	TC20/SC14/WG5

394 item (3.134) that can pose a potential threat to the schedule, cost, performance (3.166) and quality (3.188) of a project (3.178) or programme (3.177) Note 1 to entry: A critical item is controlled by a specific action (3.9) plan in order to mitigate emanating risks (3.206) and to prevent undesirable consequences.
Note 2 to entry: Examples of critical items are:
– an item not qualified or validated for the application in question (or that has previously caused problems that remain unresolved);
– an item difficult to demonstrate design (3.82, 3.83) performance;
– an item highly sensitive to the conditions under which it is produced or used (e.g. contamination (3.62), radiation);
– an item having the potential to degrade the quality of the product (3.173) significantly, and hence the ability of the end-product to accomplish defined mission (3.154) objectives;
– an item for which major difficulties or uncertainties are expected in the procurement, manufacturing, assembly (3.23), inspection (3.127), test (3.239), handling, storage and transportation that can have the potential to lead to a major degradation in the quality of the product.
Note 3 to entry: Critical items (e. g., functions (3.110), parts, software (3.217), characteristics (3.41), processes (3.171)) have significant effect on the provision (3.181) and use of the products and services; including safety (3.210), performance, form, fit, function, producibility, service life, etc.; that require specific actions to ensure they are adequately managed. Examples of critical items include safety critical items, fracture critical items, mission critical items, key characteristics (3.135), etc.

313 *critical location*

	ISO 16454:2007	3.9	TC20/SC14/WG1

395 structural point at which rupture, local buckling or detrimental deformation will first lead to structural failure

314 *critical material*

	ISO 10794:2018	3.1	TC20/SC14/WG5

396 material that is new to an individual company or non-validated for the particular application and environment, or that has caused problems during previous use that remain unresolved

315 *critical mechanical part*

	ISO 10794:2018	3.2	TC20/SC14/WG5

397 mechanical part that requires specific attention or control due to fracture mechanics aspects and limited-life aspects, or with which the contractor has no previous experience of using the mechanical part in the specific application and environment or are new or non-qualified, or that has caused problems during previous use that remain unsolved

316 *critical non-flight item*

	ISO 22108:2008	2.1	TC20/SC14/WG3

398 item of non-flight equipment whose presence in or on launched flight hardware would severely jeopardise mission performance
EXAMPLE Protective equipment cover, safety device, locking pin, fastener, ground support interface equipment.

317 *critical operation*

	ISO 18322:2017	3.1	TC20/SC14/WG2

399 operation that can result in injury to persons, significant material damage or other unacceptable consequences if not properly performed

318 *critical part of an element*

	ISO 16290:2013	2.3	TC20/SC14/WG5

400 element (2.4) part associated to a critical function
Note 1 to entry: The critical part of an element can represent a subset of the element and the technology verification for the critical function may be achievable through dedicated tests achieved on the critical part only.
Note 2 to entry: Wherever used in this International Standard, “critical part” always refers to “technology critical part”.
Note 3 to entry: Wherever used in this International Standard, “critical part” always refers to “critical part of an element"

319 *critical path*

	ISO 10795:2019	3.77	TC20/SC14/WG5

401 series of activities that determine the earliest completion of the project (3.178)
Note 1 to entry: As a consequence, delay of any one task belonging to the critical path extends the project
duration.
[SOURCE: EN 16601-00-01:2015, 2.3.58]

320 *critical process*

	ISO 10794:2018	3.3	TC20/SC14/WG5

402 process new to an individual company or non-verified for the application in question or has caused problems during previous use that remain unresolved

321 *critical stress intensity factor*

	ISO 14623:2003	2.14	TC20/SC14/WG1

403 stress intensity factor at which unstable fracture occurs

322 *critical surface*

	ISO 14952-1:2003	2.6	TC20/SC14/WG6

404 any surface of an item that contacts the critical service medium (liquid oxygen, pneumatic gases, etc.)

	ISO 16126:2014	3.5	TC20/SC14/WG7

405 <impact survivability> surface of a component which, when damaged by impact, will cause the component to fail

323 *critical telecommand*

	ISO 14950:2004	3.2.25.2	TC20/SC14/WG3

406 Level B
telecommand that, if executed at the wrong time or in the wrong configuration, could cause irreversible loss or damage for the mission (i.e. endanger the achievement of the primary mission objectives)

324 *critical unit*

	ISO 24917:2010	3.35	TC20/SC14/WG2

407 unit whose failure can affect the system operation sufficiently to cause the failure of the stated vehicle objectives or a partial loss of the mission, or whose proper performance is essential from a safety standpoint

325 *critical value of capacity for work parameter*

	ISO 17540:2016	2.43 Analysis of engine technical status 2.43.2	TC20/SC14/WG2

408 engine capacity for work parameter value, at which when exceeded the engine will be at a non-operable state (2.39.3)

326 *critical weld*

	ISO 14625:2007	3.1.3	TC20/SC14/WG3

409 weld whose single failure during any operating condition could result in injury to personnel or damage to property or flight hardware

327 *cross-contamination*

	ISO 15388:2012	3.1.21	TC20/SC14/WG6

410 transfer of contaminants from one surface or component to another
NOTE Transfer can occur by migration along a surface, by physical contact, airborne as an aerosol, or as a gas or molecular matter.

328 *CubeSat*

	ISO 17770:2017	3.1	TC20/SC14/WG1

411 picosatellite measuring 100mm cubic and weighing 1,33 kg or less
Note 1 to entry: Variations on the basic form factor are also considered CubeSats.

	ISO 19683:2017	3.6	TC20/SC14/WG1

412 box-shaped satellite whose volume is composed of “N” 10 cm × 10 cm × 10 cm sub-volumes
EXAMPLE 1U = 10 cm × 10 cm × 10 cm, 2U = 20 cm × 10 cm × 10 cm, and 3U = 30 cm × 10 cm × 10 cm.
Note 1 to entry: See ISO 17770 for further definition.

	ISO/TS 20991:2018	3.1	TC20/SC14/WG1

413 picosatellite measuring 100 mm cubic and weidhing 1,33 kg or less
Note 1 to entry: Variations on the basic form factor are also considered CubeSats.
[SOURCE: ISO 17770:2017]

329 *current temperature coefficient*

α	**ISO 15387:2005**	3.8	TC20/SC14/WG1

414 change of the short-circuit current of a solar cell as a function of the change of cell temperature
NOTE α is expressed in amperes per degree
Celsius (A·°C⁻¹).

330 *current-voltage characteristics*

	ISO 15387:2005	3.10	TC20/SC14/WG1

415 output current of a solar cell as a function of output voltage, at a particular temperature and irradiance
NOTE I = f(V).

331 *customer*

	ISO 10795:2019	3.78	TC20/SC14/WG5

416 person or organization (3.163) that could or does receive a product (3.173) or a service that is intended for or required by this person or organization
EXAMPLE Consumer, client, end-user, retailer, receiver of product or service from an internal process (3.171), beneficiary and purchaser (3.182).
Note 1 to entry: A customer can be internal or external to the organization.
[SOURCE: ISO 9000:2015, 3.2.4]

	ISO 14621-2:2019	3.1.1	TC20/SC14/WG5

417 person or organization that could or does receive a product or a service that is intended for or required by this person or organization
[SOURCE: ISO 9000:2015, 3.2.4, modified — EXAMPLE and Note 1 to entry have been deleted.]

	ISO 16091:2018	3.1.3	TC20/SC14/WG5

418 person or organization that could or does receives a product or a service that is intended for or required by this person or organization
EXAMPLE Consumer, client, end-user, retailer, receiver of product or service from an internal process, beneficiary and purchaser.
Note 1 to entry: A customer can be internal or external to the organization.
[SOURCE: ISO 9000:2015, 3.2.4]

	ISO 20892:2018	3.5	TC20/SC14/WG5

419 <modernization> organization which owns or manages an LC and makes a contract with the main executor for launch complex modernization (3.1) or its components

	ISO 26870:2009	3.3	TC20/SC14/WG3

420 firm that awards the design specification or work task and finances the work

332 *customer reserve*

	ISO 22010:2007	3.5	TC20/SC14/WG1

421 allowance defined by the customer according to the agreements of the contract

333 *cut-off*

	ISO 15862:2009	2.1	TC20/SC14/WG2

422 load case when the engine thrust begins to decrease from current value to zero

334 *cut-off frequency of acoustic horn*

	ISO 19924:2017	3.8	TC20/SC14/WG2

423 frequency below which an acoustic horn becomes increasingly ineffective.

335 *cut-off impulse*

	ISO 17540:2016	2.7 General parameters and performance of engine 2.7.15	TC20/SC14/WG2

424 impulse (2.9.5) of engine thrust for the time interval defining the engine tail-off

336 *cut-off rigidity*

	ISO 17520:2016	2.8	TC20/SC14/WG4

425 location of a transition, in rigidity space, from allowed to forbidden trajectories as rigidity is decreasing

	ISO 17761:2015	2.3	TC20/SC14/WG4

426 location of a transition for primary charged cosmic ray particles, in rigidity space, from allowed to forbidden trajectories as rigidity is decreased [3]
[3] ISO 16695, Space environment (natural and artificial) — Geomagnetic reference models

337 *cycle period*

	ISO 17540:2016	2.9 Low-thrust engine performance 2.9.11	TC20/SC14/WG2

427 on-time (2.9.8) and off-time (2.9.10) sum

338 *cycle period to on-time ratio*

	ISO 17540:2016	2.9 Low-thrust engine performance 2.9.13	TC20/SC14/WG2

428 duty cycle
reciprocal of duty cycle

339 *cyclic mode*

	ISO 17540:2016	2.11 Low-thrust engine operation modes 2.11.5	TC20/SC14/WG2

429 LTE mode consisting of repeating combinations of continuous and pulsed modes (2.11.2) or combinations of inclusion (2.9.8) and repetitive pauses of varying lengths

340 *damage*

ISO 14620-2:2019 3.2 TC20/SC14/WG5

430 loss of human life, personal injury or other health impairments, occupational illness, total or partial loss of public or private property, or degradations caused to the aforesaid property or to the environment

341 *damage tolerance*

ISO 10786:2011 3.13 TC20/SC14/WG1

431 ability of a structure or a component of a structural assembly to resist failure due to the presence of flaws, cracks, or other damage for a specified period of unrepaired usage [ISO 21347:2005]

ISO 14623:2003 2.15 TC20/SC14/WG1

432 ability of a material/structure to resist failure due to the presence of flaws, cracks, delaminations, impact damage or other mechanical damage for a specified period of unrepaired usage

ISO 21347:2005 3.7 TC20/SC14/WG1

433 ability of a material/structure to resist failure due to the presence of flaws for a specified period of unrepaired usage

ISO 21648:2008 2.1.7 TC20/SC14/WG1

434 ability of structure/material to resist failure due to the presence of flaws for a specified period of unrepaired usage

ISO 24638:2008 3.6 TC20/SC14/WG1

435 ability of a material or structure to resist failure due to the presence of flaws, cracks, delaminations, impact damage or other mechanical damage for a specified period of unrepaired usage

342 *damage tolerance analysis*

ISO 21648:2008 2.1.9 TC20/SC14/WG1

436 damage tolerance analysis
damage tolerance testing
analysis/testing that is used to demonstrate damage tolerance life
NOTE For metallic parts, this type of analysis is also referred to as safe-life analysis.

ISO 24638:2008 3.7 TC20/SC14/WG1

437 damage tolerance analysis
safe-life analysis

fracture mechanics-based analysis that predicts the flaw growth behaviour of a flawed hardware item which is under service load spectrum with a pre-specified scatter factor

343 *damage tolerance life*

ISO 21648:2008 2.1.8 TC20/SC14/WG1

438 required period during which a part of a flywheel module, even containing a large undetected crack, is shown by analysis or testing not to fail catastrophically in the expected service load and environment

344 ***damage tolerance testing***

	ISO 21648:2008	2.1.9	TC20/SC14/WG1

439 damage tolerance analysis
damage tolerance testing
analysis/testing that is used to demonstrate damage tolerance life
NOTE For metallic parts, this type of analysis is also referred to as safe-life analysis.

345 ***damage tolerance threshold strain level***

	ISO 21347:2005	3.8	TC20/SC14/WG1

440 strain level below which no crack or damage propagation will occur when subjected to expected load or environmental conditions

346 ***dangerous area***

	ISO 14620-2:2019	3.3	TC20/SC14/WG5

441 area associated with a mishap or a potential mishap, inside which the consequences are catastrophic or critical

347 ***dangerous phenomenon***

	ISO 17546:2016	3.7	TC20/SC14/WG1

442 fire, burst/explosion, leakage of cell electrolyte, venting, burns from excessively high external temperatures, rupture of battery case with exposure of internal components, and smokes

348 ***data***

	ISO 16091:2018	3.1.4	TC20/SC14/WG5

443 information represented in a manner suitable for automatic processing
[SOURCE: IEC 60050-701-01-11:1992]

349 ***data log book***

DLB	**ISO 26870:2009**	3.4	TC20/SC14/WG3

444 collection of documents that define the initial and current technical condition of a facility, system or item of equipment

350 ***dead-facing***

	ISO 14302:2002	3.1.3	TC20/SC14/WG1

445 removal of power from a circuit prior to mating/de-mating of the circuit interface (usually to prevent arcing or inadvertent short circuits)

351 ***debris***

	ISO 15388:2012	3.1.22	TC20/SC14/WG6

446 solid objects with their largest dimension greater than approximately 1 mm (1 000 µm) in size

352 ***debris environment model***

	ISO 14200:2012	3.12	TC20/SC14/WG4

447 meteorid / (space) debris environment(al) model

tool that simulates realistic description of the meteoroid and debris environment of Earth, and performs risk assessment via flux predictions on user defined target orbit

353 *debris environmental model*

	ISO 14200:2012	3.12	TC20/SC14/WG4

448 meteorid / (space) debris environment(al) model

tool that simulates realistic description of the meteoroid and debris environment of Earth, and performs risk assessment via flux predictions on user defined target orbit

354 *decay orbit*

	ISO 16699:2015	3.1	TC20/SC14/WG3

449 orbit which will result in the re-entry of the space system within a specified time

355 *decay phase*

	ISO 16164:2015	3.2	TC20/SC14/WG3

450 period that begins at the end of life of a spacecraft, when it has been placed into its disposal orbit, and ends when the spacecraft has performed a re-entry
Note 1 to entry; Only applies for spacecraft performing re-entry.

	ISO 16699:2015	3.2	TC20/SC14/WG3

451 decay phase period that begins at the end of the operational phase of a space system, when it has been placed into its decay orbit, and ends when the space system has performed a re-entry
Note 1 to entry: This only applies for space systems performing re-entry

356 *defect*

	ISO 10795:2019	3.79	TC20/SC14/WG5

452 nonconformity (3.157) related to an intended or specified use
Note 1 to entry: The distinction between the concepts defect and nonconformity is important as it has legal connotations, particularly those associated with product (3.173) and service liability issues.
Note 2 to entry: The intended use as intended by the customer (3.78) can be affected by the nature of the information, such as operating or maintenance (3.145) instructions, provided by the provider.
[SOURCE: ISO 9000:2015, 3.6.10]

357 *deficiency*

	ISO/TS 18667:2018	3.1.7	TC20/SC14/WG5

453 amount that is lacking or inadequate

358 *deflagration*

	ISO 26871:2012	3.1.8	TC20/SC14/WG1

454 reaction of combustion through a substance at subsonic velocity in the reacting substance

359 *deflection*

	ISO 10785:2011	3.8	TC20/SC14/WG1

455 contraction or expansion along its longitudinal axis, angular rotation, or lateral offset
NOTE See Figure 2.

360 *degradation*

	ISO 14624-5:2006	3.1	TC20/SC14/WG6

456 adverse physical or chemical change in a substance

	ISO 14624-6:2006	3.3	TC20/SC14/WG6

457 adverse physical or chemical change in a substance

	ISO 14624-7:2006	3.2	TC20/SC14/WG6

458 adverse physical or chemical change in a substance

361 *degradation criteria*

	ISO 24637:2009	3.1.1	TC20/SC14/WG1

459 minimum performance criteria required for acceptance of the product as specified in the electromagnetic interference test plan

362 *demagnetization field*

	ISO 21494:2019	3.11	TC20/SC14/WG2

460 magnetic field used for demagnetization tests of the EUT by exposing them in an alternating sinusoidal magnetic field with a continuously attenuated amplitude and provided by a magnetization and demagnetization coil system

363 *deorbit manoeuvre*

	ISO 16699:2015	3.3	TC20/SC14/WG3

461 action of moving a space system to a new orbit that will cause the space system to re-enter the atmosphere

364 *dependability*

	ISO 10795:2019	3.80	TC20/SC14/WG5

462 <of an item> ability to perform as and when required
Note 1 to entry: Its main components (3.48) are reliability (3.198), availability (3.28) and maintainability (3.144).
Note 2 to entry: The extent to which the fulfilment of a required function (3.110) can be justifiably trusted.
Note 3 to entry: Dependability shall be considered in conjunction with safety (3.210).
Note 4 to entry: Dependability is used as a collective term for the time-related quality (3.188) characteristics (3.41) of an item (3.134).
[SOURCE: IEC 60050-192:2015, 192-01-22]

	ISO 16091:2018	3.1.5	TC20/SC14/WG5

463 <of an item> ability to perform as and when required
Note 1 to entry: Dependability characteristics include availability and its inherent or external influencing factors, such as: reliability, fault tolerance, recoverability, integrity, security, maintainability, durability, and maintenance support.
Note 2 to entry: Dependability is also used descriptively as an umbrella term for the time-related quality characteristics of a product or service, and it may also be expressed as a grade, degree, confidence or probability of fulfilling a defined set of characteristics.
Note 3 to entry: Specifications for dependability characteristics typically include the function the product is required to perform; the time for which it is required that that performance be sustained; and the conditions of storage, use and maintenance. Requirements for safety, efficiency and economy throughout the life cycle may also be included.
[SOURCE: IEC 60050-192-01-22:1992]

365 *deployer*

	ISO 17770:2017	3.2	TC20/SC14/WG1

464 encloses CubeSats within a confined volume with a lid at one side that closes the ejection port during the launch phase
Note1 toentry: It is capable of carrying

	ISO/TS 20991:2018	3.2	TC20/SC14/WG1

465 encloses CubeSats within a confined volume with a lid at one side thet closes the ejection port during the launch phase
Note 1 to entry: It is capable of carrying one or multiple standard CubeSats and serves as the interface between.
[SOURCE: ISO 17770:2017]

366 *depth distribution criterion of absorbed dose*

	ISO 15856:2010	3.1.4	TC20/SC14/WG4

466 ratio of the exponent index, μ, of the absorbed dose depth profile curve to the material density, ρ
NOTE The depth distribution criterion of absorbed dose is measured in square centimetres per gram.

367 *depth dose profile*

	ISO 15856:2010	3.1.5	TC20/SC14/WG4

467 distribution of the absorbed dose through the depth of material

368 *derating*

	ISO 10795:2019	3.81	TC20/SC14/WG5

468 action (3.9) when designing a product (3.173) to limit the component (3.48) stresses to specified levels that are below their ratings in order to increase its reliability (3.198)
[SOURCE: EN 16601-00-01:2015, 2.3.62]

369 *design*

	ISO 10795:2019	3.82, 3.83	TC20/SC14/WG5

469 <result> set of information that defines the characteristics (3.41) of a product (3.173)
[SOURCE: EN 16601-00-01:2015, 2.3.63]

<activity> process (3.171) used to generate the set of information defining the characteristics (3.41) of a product (3.173)
Note 1 to entry: The design is completed at CDR (3.74) closure.
[SOURCE: EN 16601-00-01:2015, 2.3.64]

370 *design burst factor*

	ISO 10785:2011	3.9	TC20/SC14/WG1

470 multiplying factor applied to maximum expected operating pressure (MEOP) or maximum design pressure (MDP) [3.20] to obtain the design burst pressure

371 *design burst pressure*

	ISO 10785:2011	3.10	TC20/SC14/WG1

471 differential pressure that pressurized hardware must withstand without bursting in the applicable operational environment
NOTE Design burst pressure is equal to the product of the MEOP or MDP and a design burst factor.
[ISO 14623:2003, definition 2.16]

	ISO 14623:2003	2.16	TC20/SC14/WG1

472 design burst pressure (preferred term)
burst pressure (admitted term)
“ultimate pressure” (admitted term)

differential pressure that pressurized hardware must withstand without burst in the applicable operational environment
NOTE Design burst pressure is equal to the product of the MEOP or MDP and a design burst factor.

	ISO 24638:2008	3.8	TC20/SC14/WG1

473 design burst pressure (preferred term)
burst pressure (admitted term)
ultimate pressure (admitted term)

differential pressure that pressurized hardware needs to withstand without burst in the applicable operational environment
NOTE Design burst pressure is equal to the product of the maximum expected operating pressure or maximum design pressure and a design burst factor.

372 *design documentation*

	ISO 16159:2012	2.3	TC20/SC14/WG3

474 documentation created by the developer and containing the requirements for the manufacture, fabrication, purchase or production of the components of the facility, system or equipment

373 *design factor of safety*

	ISO 10785:2011	3.11	TC20/SC14/WG1

475 design safety factor
design factor of safety
factor of safety

multiplying factor to be applied to the limit load and/or maximum expected operating pressure (MEOP) or maximum design pressure (MDP) [3.20]
[ISO 14623:2003, definition 2.17]

	ISO 14623:2003	2.17	TC20/SC14/WG1

476 design safety factor (preferred term)
design factor of safety (admitted term)
factor of safety (admitted term)

multiplying factor to be applied to the limit load and/or MEOP(or MDP)

	ISO 21347:2005	3.9	TC20/SC14/WG1

477 design safety factor (preferred term)
design factor of safety (admitted term)
factor of safety (admitted term)
multiplying factor to be applied to the limit load and/or maximum expected operating pressure (MEOP), or maximum design pressure (MDP), for the purpose of analytical assessment and/or test verification of structural adequacy
EXAMPLE The design burst factor applied to the MEOP is the required design burst pressure for analysis or test.

	ISO 24638:2008	3.9	TC20/SC14/WG1

478 design safety factor (preferred term)
design factor of safety (admitted term)
factor of safety (admitted term)

multiplying factor to be applied to limit loads and/or maximum expected operating pressure (or maximum design pressure)

374 *design lifetime*

	ISO 14622:2000	2.11.3	TC20/SC14/WG1

479 lifetime used for designing structures, and in particular, for the damage tolerance studies

375 *design parameter*

	ISO 10786:2011	3.14	TC20/SC14/WG1

480 physical feature which influences the design performance of the design of structural items
NOTE According to the nature of the design variables, different design problems can be identified such as:
- structural sizing for the dimensioning of beams, shells, etc.;
- shape optimization;
- material selection;
- structural topology.

376 *design review*

	ISO 10795:2019	3.84	TC20/SC14/WG5

481 formal, independent examination of a design (3.82, 3.83) to identify shortcomings that could affect the fitness for purpose, reliability, maintainability, or maintenance requirements of the item concerned
Note 1 to entry: In this context, “design” includes requirements (3.201), specifications (3.227), drawings, and supporting documentation (3.89).
Note 2 to entry: Design review is not, by itself, sufficient to ensure the adequacy of the emerging design.

377 *design safety factor*

	ISO 10785:2011	3.11	TC20/SC14/WG1

482 design safety factor
design factor of safety
factor of safety

multiplying factor to be applied to the limit load and/or maximum expected operating pressure (MEOP) or maximum design pressure (MDP) [3.20]
[ISO 14623:2003, definition 2.17]

	ISO 10786:2011	3.15	TC20/SC14/WG1

483 factor by which limit loads are multiplied in order to account for uncertainties and variations that cannot be analysed or accounted for explicitly in a rational manner
NOTE Design safety factor is sometimes referred to as design factor of safety, factor of safety or just safety factor.

	ISO 14623:2003	2.17	TC20/SC14/WG1

484 design safety factor (preferred term)
design factor of safety (admitted term)
factor or safety (admitted term)

multiplying factor to be applied to the limit load and/or MEOP(or MDP)

	ISO 16454:2007	3.10	TC20/SC14/WG1

485 coefficient by which limit loads are multiplied in order to account for the statistical variations of loads and structure resistance, and inaccuracies in the knowledge of their statistical distributions

	ISO 21347:2005	3.9	TC20/SC14/WG1

486 design safety factor (preferred term)
design factor of safety (admitted term)
factor of safety (admitted term)
multiplying factor to be applied to the limit load and/or maximum expected operating pressure (MEOP), or maximum design pressure (MDP), for the purpose of analytical assessment and/or test verification of structural adequacy
EXAMPLE The design burst factor applied to the MEOP is the required design burst pressure for analysis or test.

	ISO 21648:2008	2.1.10	TC20/SC14/WG1

487 multiplying factor to be applied to the limit load and/or maximum expected operating speed

	ISO 24638:2008	3.9	TC20/SC14/WG1

488 design safety factor (preferred term)
design factor of safety (admitted term)
factor of safety (admitted term)

multiplying factor to be applied to limit loads and/or maximum expected operating pressure (or maximum design pressure)

378 *design temperature*

	ISO 14622:2000	2.7.2	TC20/SC14/WG1

489 heat flux evaluated in the most unfavourable heat exchange condition

379 *design verification*

	ISO 16404:2013	3.1	TC20/SC14/WG5

490 evaluation of the implementation of the design (architecture, components) against the requirements to determine that they can be met
Note 1 to entry: This is compliant with ISO 9001 Verification.

380 *designed operating life*

	ISO 17540:2016	2.8 Engine time characteristics, types of operating and resources 2.8.2	TC20/SC14/WG2

491 period of time during which the engine is expected to operate within its specified design parameters

381 *destabilizing load*

	ISO 16454:2007	3.11	TC20/SC14/WG1

492 load that produces compressive stress at critical location

382 *destabilizing pressure*

	ISO 14623:2003	2.18	TC20/SC14/WG1

493 differential pressure that produces compressive stresses in pressure hardware

383 *detection system*

	ISO 17540:2016	2.49 Stand systems 2.49.9	TC20/SC14/WG2

494 accumulated hazard materials
stand system (2.47.5) intended for environment composition control with appropriate audible and luminous signal warnings when the quantity of hazard materials exceed permissible limits

384 *detonation*

ISO 26871:2012 3.1.9 TC20/SC14/WG1

495 chemical decomposition propagating through the explosive at a supersonic velocity such that a shock wave is generated

385 *detonator*

ISO 26871:2012 3.1.10 TC20/SC14/WG1

496 first element whose output is a high-order detonation
NOTE Detonators are generally used to effect detonation transfers within explosive trains.

386 *detrimental deformation*

ISO 10785:2011 3.12 TC20/SC14/WG1

497 structural deformation, deflection or displacement that prevents any portion of the structure or other system from performing its intended function or that jeopardizes mission success
NOTE Adapted from ISO 14623:2003, definition 2.19.

ISO 10786:2011 3.16 TC20/SC14/WG1

498 structural deformation, deflection or displacement that prevents any portion of the structure or some other system from performing its intended function or that jeopardizes mission success

ISO 14623:2003 2.19 TC20/SC14/WG1

499 structural deformation, deflection, or displacement that prevents any portion of the structure or other system from performing its intended function

ISO 24638:2008 3.10 TC20/SC14/WG1

500 structural deformation, deflection or displacement that prevents any portion of the structure or other system from performing its intended function

387 *detrimental yielding*

ISO 16454:2007 3.12 TC20/SC14/WG1

501 ⟨metallic structures⟩ permanent deformation specified at the system level to be detrimental

388 *developing agency*

ISO 23041:2018 3.3 TC20/SC14/WG3

502 organization that develops the spacecraft and operation system under contract to the acquiring agency
Note 1 to entry: One organization may constitute more than one of these agencies.

389 *Development*

ISO 10795:2019 3.85 TC20/SC14/WG5

503 process (3.171) by which the capability to adequately implement a technology or design (3.82, 3.83) is established before manufacture
Note 1 to entry: This process can include the building of various partial or complete models (3.155) of the products (3.173) and assessment (3.24) of their performance (3.166).

390 *development model*

	ISO 15864:2004	3.1.1	TC20/SC14/WG2

504 representative of spacecraft, subsystem or unit dedicated to increase confidence in design and subjected to development tests

391 *development test*

	ISO 10786:2011	3.17	TC20/SC14/WG1

505 test to provide information that can be used to check the validity of analytic techniques and assumed design parameters, uncover unexpected system response characteristics, evaluate design changes, determine interface compatibility, prove qualification and acceptance procedures and techniques, check manufacturing technology, or establish accept/reject criteria
[ISO 16454:2007]

	ISO 14623:2003	2.20	TC20/SC14/WG1

506 test to provide design information that may be used to check the validity of analytic technique and assumed design parameters, to uncover unexpected system response characteristics, to evaluate design changes, to determine interface compatibility, to prove qualification and acceptance procedures and techniques, to check manufacturing technology, or to establish accept/reject criteria

	ISO 16454:2007	3.13	TC20/SC14/WG1

507 test to provide design information that can be used to check the validity of analytic technique and assumed design parameters, to uncover unexpected system response characteristics, to evaluate design changes, to determine interface compatibility, to prove qualification and acceptance procedures and techniques, to check
manufacturing technology, or to establish accept/reject criteria

	ISO 17540:2016	2.34 Types of engine tests: Test purposes 2.34.2	TC20/SC14/WG2

508 engine research test for the purpose of accessing data necessary for creating the final design

392 *deviation*

	ISO 10795:2019	3.86	TC20/SC14/WG5

509 formal authorization (3.27) to depart from the originally specified requirements (3.201) for a product (3.173), prior to its production
Note 1 to entry: “Waiver (3.245)” is a posterior decision whereas “deviation” is an anterior decision with respect to production phase.
Note 2 to entry: Deviation can be a permission to use or release a product that does not conform to specified requirements.
[SOURCE: EN 16601-00-01:2015, 2.3.66, modified – Note 2 to entry has been added.]

393 *device telecommand*

	ISO 14950:2004	3.2.5	TC20/SC14/WG3

510 telecommand that is routed to and executed by on-board hardware
EXAMPLE A relay switching telecommand or a telecommand to load an on-board register.

394 *dewar*

ISO 14952-1:2003 2.7 TC20/SC14/WG6

511 double-walled vessel with the annular space between the walls evacuated to provide insulation

395 *dewpoint*

ISO 14952-1:2003 2.8 TC20/SC14/WG6

512 double-walled vessel with the annular space between the walls evacuated to provide insulation
NOTE The prevailing pressure is usually atmospheric pressure.

396 *differential capacitance*

ISO 11221:2011 2.5 TC20/SC14/WG4

513 capacitance between any two points in a spacecraft, especially between the insulator surface and the spacecraft body

397 *differential charging*

ISO 11221:2011 2.4 TC20/SC14/WG4

514 spacecraft charging where any two points are charged to different potentials

398 *differential energy spectrum*

ISO 23038:2018 3.1 TC20/SC14/WG1

515 spread of energies of some specific group
Note 1 to entry: In this document, this refers to the number of particles possessing an energy value that lies in the infinitesimal range E, E + dE divided by the size of the range (dE). Integration of the differential particle spectrum over all particle energies yields the total number of particles. This quantity is given in units of particles per unit area per unit energy.

399 *Differential particle peak flux energy spectrum*

f(E) *df/dE* **ISO/TR 18147:2014** 2 TC20/SC14/WG4

516 Differential particle peak flux energy (E) distribution during the space mission [particle/(cm2·sr·s·MeV)]

400 *differential potential*

ISO 19923:2017 3.2 TC20/SC14/WG4

517 differential voltage
differential potential
potential difference between any two points in spacecraft, especially the insulator surface and the spacecraft body, during differential charging

401 *Differential proton fluence energy spectrum*

F(E) *dF/dE* **ISO/TR 18147:2014** 2 TC20/SC14/WG4

518 Differential particle fluence energy (E) distribution during the space mission [particle/(cm2·MeV)].

402 *differential voltage*

	ISO 11221:2011	2.6	TC20/SC14/WG4

519 potential difference between any two points in a spacecraft during spacecraft charging, especially between the insulator exterior surface potential and the spacecraft chassis potential

	ISO 19923:2017	3.2	TC20/SC14/WG4

520 differential voltage
differential potential
potential difference between any two points in spacecraft, especially the insulator surface and the spacecraft body, during differential charging

403 *diffuse*

	ISO 16378:2013	3.3	TC20/SC14/WG6

521 indicates that flux propagates in many directions, as opposed to direct beam, which refers to collimated flux. When referring to reflectance, it is the directional-hemispherical reflectance less the specular reflectance

404 *diffuse sound field*

	ISO 19924:2017	3.2	TC20/SC14/WG2

522 sound field that has uniform energy density in a given region so that all directions of energy flux at all parts of the region are equally probable

405 *direct method*

	ISO 15859-3:2004	3.1	TC20/SC14/WG6

523 method of measuring fluid purity by direct means as opposed to the indirect method
NOTE A measurement device or analyser can be used as a direct means for measuring the fluid purity.

406 *direct oxygen service*

	ISO 22538-1:2007	3.1.1	TC20/SC14/WG6

524 service in which materials and components are in direct contact with oxygen during normal operations

	ISO 22538-2:2007	3.1.1	TC20/SC14/WG6

525 service in which materials and components are in direct contact with oxygen during normal operations

	ISO 22538-3:2007	3.1.3	TC20/SC14/WG6

526 service in which materials and components are in direct contact with oxygen during normal operations

407 *disassembly*

	ISO 17546:2016	3.8	TC20/SC14/WG1

527 vent or rupture where solid matter from any part of a cell or battery penetrates a wire mesh screen (annealed aluminum wire with a diameter of 0,25 mm and grid density of 6 wires per cm to 7 wires per cm) placed 25 cm away from the cell or battery. [6]

[6] ST/SG/AC. 10/11/Rev.5/Amend.1, “United Nations Transport of Dangerous Goods UN Manual of Tests and Criteria, Part III, sub-section 38.3 Fifth revised edition Amendment 1”

408 discharge inception voltage

	ISO 11221:2011	2.7	TC20/SC14/WG4

528 lowest voltage at which discharges of specified magnitude will recur when a DC voltage is applied between any two points in a spacecraft, especially between the insulator surface and the spacecraft body

409 discrepancy

	ISO 10795:2019	3.87	TC20/SC14/WG5

529 departures from expected performance (3.166)
Note 1 to entry: They can be the result of nonconforming hardware (3.119) and/or software (3.217), or conditions occurring in test (3.239) set-up. These differences from expected performance levels can be momentary, nonrepeatable, or permanent.

410 discrepant component

	ISO 16159:2012	2.2	TC20/SC14/WG3

530 first component of a facility, a system or equipment that manifests failure
NOTE The discrepant component may or may not be the primary or initial component to fail.

411 disk nozzle

	ISO 17540:2016	2.15 Nozzle types 2.15.7	TC20/SC14/WG2

531 nozzle with internal expansion
ring nozzle (2.15.5) in which the internal zone is almost or completely absent at the expanding part contour

412 disposal

	ISO 16126:2014	3.6	TC20/SC14/WG7

532 actions performed by a spacecraft to permanently reduce its chance of accidental break-up, and to achieve its required long-term clearance of the protected regions
[SOURCE: ISO 24113:2011, 3.4, modified]

	ISO 24113:2019	3.5	TC20/SC14/WG7

533 actions performed by a spacecraft (3.25) or launch vehicle orbital stage (3.13) to permanently reduce its chance of accidental break-up (3.2) and to achieve its required long-term clearance of the protected regions (3.21)
Note 1 to entry: Actions can include removing stored energy and performing post-mission orbital manoeuvres.

413 disposal manoeuvre

	ISO 16164:2015	3.3	TC20/SC14/WG3

534 action of moving a spacecraft to its disposal orbit

	ISO 23339:2010	3.2	TC20/SC14/WG3

535 orbital manoeuvre that disposes of a spacecraft from the protected regions by either decreasing or increasing the altitude of the spacecraft

	ISO 24113:2019	3.6	TC20/SC14/WG7

536 action of moving a spacecraft (3.25) or launch vehicle orbital stage (3.13) to a different orbit as part of its disposal (3.5)

414 *disposal orbit*

	ISO 16164:2015	3.4	TC20/SC14/WG3

537 orbit in which a spacecraft resides following the completion of its disposal manoeuvre

415 *disposal phase*

	ISO 24113:2019	3.7	TC20/SC14/WG7

538 interval during which a spacecraft (3.25) or launch vehicle orbital stage (3.13) performs its disposal (3.5)

416 *disruption of production*

	ISO 17540:2016	2.45 Engine quality control 2.45.5	TC20/SC14/WG2

539 calendar time from the production of the last engine specimen to the renewal of engine production according to the manufacturer plan

417 *Disturbance storm time*

Dst	**ISO/TS 21979:2018**	3.7	TC20/SC14/WG4

540 geomagnetic index used in external magnetic field model computation that describes variations in the equatorial ring current and is derived from hourly scalings of low-latitude horizontal magnetic variation
Note 1 to entry: Dst is expressed in nT.

418 *document*

	ISO 10795:2019	3.88	TC20/SC14/WG5

541 information and the medium on which it is contained
EXAMPLE Record (3.194), specification (3.227), procedure (3.170) document, drawing, report, standard (3.228).
Note 1 to entry: The medium can be paper, magnetic, electronic or optical computer disc, photograph or master sample, or a combination thereof.
Note 2 to entry: A set of documents, for example specifications and records, is frequently called “documentation (3.89)”.
Note 3 to entry: Some requirements (3.201) (e.g. the requirement to be readable) relate to all types of documents. However there can be different requirements for specifications (e.g. the requirement to be revision controlled) and for records (e.g. the requirement to be retrievable).
[SOURCE: ISO 9000:2015, 3.8.5]

	ISO 16091:2018	3.1.6	TC20/SC14/WG5

542 information and its supporting medium
EXAMPLE Record, specification, procedure document, drawing, report, standard.
Note 1 to entry: The medium can be paper, magnetic, electronic or optical computer disc, photograph or master sample, or a combination thereof.
Note 2 to entry: A set of documents, for example specifications and records, is frequently called "documentation".
Note 3 to entry: Some requirements (e.g. the requirement of readability) relate to all types of documents, however there can be different requirements for specifications (e.g. the requirement that they be revision controllable) and records (e.g. the requirement that they be retrievable).
[SOURCE: ISO 9000:2015, 3.8.5]

419 *documentation*

	ISO 10795:2019	3.89	TC20/SC14/WG5

543 one mode of information communication
Note 1 to entry: This includes management (3.146) and technical data current as of a given point in time and may be used to reflect contractor (3.66) to customer (3.78) and/or contractor to contractor agreements and procedures (3.170). This includes such items (3.134) as program plans, procedures, specifications (3.227), ICDs (3.133), reports, technical publications, training documentation.
[SOURCE: SSP 30235]

420 *documentation management*

	ISO 10789:2011	3.1	TC20/SC14/WG5

544 information/documentation management
process for ensuring timely and effective creation, collection, review, delivery, storage, and archiving of project information

421 *dose*

	ISO 21980:2020	3.5	TC20/SC14/WG4

545 idiomatic term which expresses the radiation dose and the absorbed energy
Note 1 to entry: Dose is used to express various meanings, such as the absorbed dose (3.4), exposure dose, etc.

422 *dose rate*

	ISO 21980:2020	3.13	TC20/SC14/WG4

546 dose (3.5) per unit of time

423 *double Maxwellian distribution*

	ISO 19923:2017	3.1	TC20/SC14/WG4

547 electron and proton distribution functions in GEO fitted with two temperatures
Note 1 to entry: Maxwellian distribution is as follows [12]:
$f(v) = (m/2\pi)^{3/2}[n1/(kT1)^{3/2}\exp(-(mv^2/2kT1)) + n2/(kT2)^{3/2}\exp(-(mv^2/2kT2))]$
where
m is the mass of particle;
k is the Boltzmann constant 1,380 648 52 × 10^{-23} J/K;
n1, n2 are the number density of particle;
T1, T2 are the temperature of particle
[12] Hastings D., & Garrett H. Spacecraft Environment Interactions. Cambridge University Press, 1996

424 *down time*

ISO 16091:2018 3.1.7 TC20/SC14/WG5

548 time interval during which an item is in a down state
Note 1 to entry: Down time excludes disabled time due to lack of external resources, but includes maintenance time.
[SOURCE: IEC 60050-192-02-21:1992]

425 *Drag Temperature Model 2009*

DTM-2009 **ISO 14222:2013** 2.9 TC20/SC14/WG4

549 model that describes the neutral temperature and major and some minor species densities in Earth's atmosphere between an altitude of 120 km to approximately 1 500 km
Note 1 to entry: DTM-2009 is based on a large database going back to the early '70s, essentially the same that was used for NRLMSISE-00 except for the radar data. In addition, high-resolution CHAMP and GRACE accelerometer-inferred densities are assimilated in DTM-2009.
Note 2 to entry: DTM-2009 is valid from an altitude of 120 km to approximately 1 500 km in the exosphere. Two indices are used in this model: FJOJ solar flux (both daily solar flux of the previous day and the 81-day average centred on the input day) and Kp (3-hour value delayed by three hours, and the average of the last 24 hours).
Note 3 to entry: The DTM model codes (DTM-94, DTM-2000, DTM-2009) are available for download on the ATMOP project website http://www.atmop.eu/downloads.php
Note 4 to entry: See Reference 4 in standards

426 *ductile fracture*

ISO 14623:2003 2.21 TC20/SC14/WG1

550 type of failure mode in a material/structure generally preceded by a large amount of plastic deformation

427 *ductile material*

ISO 11227:2012 3.1.2 TC20/SC14/WG7

551 material that can be plastically deformed without breaking under the action of a stress

428 *dud*

ISO 26871:2012 3.1.11 TC20/SC14/WG1

552 explosive charge or component that fails to fire or function upon receipt of the prescribed initiating stimulus, after an external effect (human failure, manufacturing failure, environmental, chemical, ageing, etc.)

429 *durability criteria*

	ISO 17851:2016	3.5 Terms related to physical and chemical mechanisms of space environment effects on materials 3.5.3	TC20/SC14/WG4

553 maximum permissible changes in operational parameters of spacecraft materials and equipment causing by the impact of primary and secondary space environment factors when a material or an equipment element can perform the given function
- radiation hardness
- durability to surface and internal charge accumulation
- mass losses and surface erosion
- surface contamination
- thermal stability

Note 1 to entry: In determining durability criteria, mechanical, thermal, electrical and optical properties of materials are to be considered.

430 *duty cycle*

	ISO 17540:2016	2.9 Low-thrust engine performance 2.9.13	TC20/SC14/WG2

554 cycle period to on-time ratio
reciprocal of duty cycle

431 *dynamic load*

	ISO 10786:2011	3.18	TC20/SC14/WG1

555 time-dependent load with deterministic or stochastic variation

432 *early operations*

	ISO 10784-1:2011	3.1.2	TC20/SC14/WG2

556 period from initialization to commissioning for mission operations

	ISO 10784-2:2011	3.1.2	TC20/SC14/WG2

557 period from initialization to commissioning for mission operations

	ISO 10784-3:2011	3.1.2	TC20/SC14/WG2

558 period from initialization to commissioning for mission operations

433 *earth equatorial radius*

	ISO 27852:2016	3.1.2	TC20/SC14/WG3

559 equatorial radius of the Earth
Note 1 to entry: The equatorial radius of the Earth is taken as 6,378.137 km and this radius is used as the reference for the Earth’s surface from which the orbit regions are defined.

434 *Earth GRAM 2007*

	ISO 14222:2013	2.8	TC20/SC14/WG4

560 Earth Global Reference Atmosphere Models (latest version is GRAM 2010) produced on behalf of NASA, that describe the terrestrial atmosphere from ground level upward for operational purposes
Note 1 to entry: GRAM 2010 provides a global reference terrestrial atmosphere model based on a combination of empirically based models that represent different altitude ranges up to ~120 km. The upper atmosphere section above ~120 km has the option of three different atmosphere models, the Marshall Thermosphere (MET-07), the Naval Research Laboratory Mass Spectrometer, Incoherent Scatter Radar Extended (NRLMISE-00) and the Jacchia-Bowman (JB-2008) model. In addition the NRL1993 Harmonic Wind Model (HWM-93) is included for use in conjunction with the NRLMISE-00.
Note 2 to entry: These models are available via license from NASA to qualified users and provide usability and information quality similar to that of the NRLMSISE-00 Model. Earth GRAM 2007 includes options for NRLMSIS-00, HMW-93, and JB2006
models.
Note 3 to entry: See Reference 4 in standard

435 *Earth orbit*

	ISO 24113:2019	3.8	TC20/SC14/WG7

561 bounded or unbounded Keplerian orbit with Earth at a focal point, or Lagrange point orbit which includes Earth as one of the two main bodies
Note 1 to entry: For the purposes of this document, it is not necessary to consider space objects (3.24) in unbounded Keplerian orbits if their probability of interference with the LEO and GEO (3.11) protected regions (3.21) is negligible.

436 *Earth's ionosphere*

	ISO 17851:2016	3.1 Terms related to regions in space 3.1.3	TC20/SC14/WG4

562 region of the Earth's atmosphere at 50 km to 1 500 km height containing partially ionized cold plasma

437 *Earth's magnetosphere*

	ISO 17851:2016	3.1 Terms related to regions in space 3.1.2	TC20/SC14/WG4

563 region of the near-Earth space occupied by the Earth's magnetic field where physical conditions are determined by its interaction with solar wind

438 *EEE component*

	ISO 10795:2019	3.90	TC20/SC14/WG5

564 EEE component
EEE part

device that performs an electrical, electronic or electromechanical (EEE) function (3.110), including electrooptical devices, and consists of one or more elements so joined together that they cannot normally be disassembled without destroying the functionality of the device

439 *EEE part*

	ISO 10795:2019	3.90	TC20/SC14/WG5

565 EEE component
EEE part

device that performs an electrical, electronic or electromechanical (EEE) function (3.110), including electrooptical devices, and consists of one or more elements so joined together that they cannot normally be disassembled without destroying the functionality of the device

440 *effective cut-off rigidity*

Reff	**ISO 17520:2016**	2.12	TC20/SC14/WG4

566 total effect of the penumbral structure in a given direction may be represented for a number of purposes, by the “effective cut-off rigidity”, a single numerical value which specifies the equivalent total accessible cosmic radiation within the penumbra in a specific direction

441 *effective vertical cut-off rigidity*

EVRC	**ISO 17520:2016**	2.13	TC20/SC14/WG4

567 effective cut-off rigidity value for a particle arriving to a fixed point in the vertical direction (radially to the centre of the Earth)

442 *efficiency*

	ISO 14950:2004	3.1.3	TC20/SC14/WG3

568 optimum distribution of tasks between the ground and space segments taking into account cost, complexity, technology and reliability

443 *efficiency of booster turbine pump*

	ISO 17540:2016	2.22 Turbine pump general characteristics 2.22.3	TC20/SC14/WG2

569 ratio of the sum of pump available capacities to the gas turbine adiabatic capacity or hydraulic turbine theoretical capacity

444 *efficiency of turbine pump*

	ISO 17540:2016	2.22 Turbine pump general characteristics 2.22.2	TC20/SC14/WG2

570 ratio of the sum of pump available capacities to the sum of turbine adiabatic capacities

445 *effluent*

	ISO 17546:2016	3.9	TC20/SC14/WG1

571 liquid or gas released when a cell vents or leaks [6]

[6] ST/SG/AC. 10/11/Rev.5/Amend.1, “United Nations Transport of Dangerous Goods UN Manual of Tests and Criteria, Part III, sub-section 38.3 Fifth revised edition Amendment 1”

446 *ejecta cone*

	ISO 11227:2012	3.1.3	TC20/SC14/WG7

572 shaped spray of fine particles, comprising fragments and spalls that are released during a high-velocity impact

447 *elastically responding metallic liner*

	ISO 14623:2003	2.22	TC20/SC14/WG1

573 metallic liner of a composite overwrapped pressure vessel that responds elastically (experiences no plastic response) at all pressure up to and including the vessel's acceptance proof pressure after the autofrettage operation

448 *electric power supply system*

	ISO 17540:2016	2.49 Stand systems 2.49.13	TC20/SC14/WG2

574 stand system (2.47.5) designed for the stand to supply devices with electric power

449 *electric propulsion*

	ISO 11221:2011	2.9	TC20/SC14/WG4

575 spacecraft propulsion system in which the thrust is generated by accelerating charged particles that are neutralized before they are ejected in order to produce a jet

450 *electrical breakdown*

	ISO 11221:2011	2.8	TC20/SC14/WG4

576 failure of the insulation properties of a dielectric, resulting in a sudden release of charge with possible damage to the dielectric concerned

451 *electrical hydraulic valve*

	ISO 17540:2016	2.23 Automation units 2.23.4	TC20/SC14/WG2

577 hydraulic solenoid
valve whose sluice is activated by the electromagnet and hydraulic drive parts of the valve

452 *electrical model*

	ISO 24917:2010	3.27	TC20/SC14/WG2

578 model representing the electrical flight characteristics

453 *electrical valve*

	ISO 17540:2016	2.23 Automation units 2.23.1	TC20/SC14/WG2

579 solenoid
engine valve whose sluice activates by the electromagnet part of the valve

454 *electro-explosive device*

	ISO 26871:2012	3.1.12	TC20/SC14/WG1

580 explosive cartridge that is electrically actuated

455 electrolytic engine

	ISO 17540:2016	2.6 Low-thrust engine types by way of work process 2.6.8	TC20/SC14/WG2

581 one-component of the LTE (2.1.3) where the electrolysis of the propellant is part of operating process

456 electromagnetic compatibility

EMC	ISO 14302:2002	3.1.4	TC20/SC14/WG1

582 ability of a space equipment or system to function satisfactorily in its electromagnetic environment without introducing intolerable electromagnetic disturbances to anything in that environment

457 electromagnetic interference

EMI	ISO 14302:2002	3.1.5	TC20/SC14/WG1

583 degradation of the performance of a space equipment, transmission, channel, or system caused by an electromagnetic disturbance

458 electron

e−	ISO 23038:2018	3.2	TC20/SC14/WG1

584 elementary particle of rest mass m = 9,109 kg × 10^{-31} kg, having a negative charge of 1,602 C × 10⁻19 C

459 electronic, electrical, or electromechanical part

EEE part	ISO 14621-1:2019	3.1.2	TC20/SC14/WG5

585 device that performs an electronic, electrical, or electromechanical (EEE) function, including electro-optical devices, and consists of one or more elements so joined together that they cannot normally be disassembled without destroying the functionality of the device

EEE part	ISO 14621-2:2019	3.1.3	TC20/SC14/WG5

586 device that performs an electrical, electronic, or electromechanical (EEE) function, including electro-optical devices, and consists of one or more elements so joined together that they cannot normally be disassembled without destroying the functionality of the device

460 electrostatic discharge

	ISO 11221:2011	2.10	TC20/SC14/WG4

587 electrical breakdown of dielectric or gas or vacuum gaps, and also of surface interface of dissimilar materials, caused by differential charging of parts of dielectric materials and their interfaces

ESD	ISO 15388:2012	3.1.23	TC20/SC14/WG6

588 electrical breakdown of dielectric or gas or vacuum gaps, and also of surface interface of dissimilar materials, caused by differential charging of parts of dielectric materials and their interfaces
[ISO 11221:2011, 2.10]

461 electro-thermal engine

	ISO 17540:2016	2.6 Low-thrust engine types by way of work process 2.6.6	TC20/SC14/WG2

589 thermal LTE using an electrical energy source

462 *electro-thermo-catalytic engine*

	ISO 17540:2016	2.6 Low-thrust engine types by way of work process 2.6.3	TC20/SC14/WG2

590 thermo-catalytic LTE using an electrical source of energy

463 *element*

	ISO 16290:2013	2.4	TC20/SC14/WG5

591 item or object under consideration for the technology readiness assessment.
NOTE 1 to entry: The element can be a component, a piece of equipment, a subsystem or a system

464 *element function*

	ISO 16290:2013	2.5	TC20/SC14/WG5

592 intended effect of the element (2.4)

465 *emergency*

	ISO 14620-1:2018	3.1.7	TC20/SC14/WG5

593 condition when potentially catastrophic or critical hazardous events have occurred, where immediate and pre-planned safing action is possible and is mandatory in order to protect personnel
[SOURCE: Adapted from EN 13701:2001]

466 *emergency drain*

	ISO 17540:2016	2.51 Stand system elements 2.51.5	TC20/SC14/WG2

594 stand tank of dumping
stand tank (2.51.1) used to receive propellant component from the main and/or starting tanks and pipeline (2.51.6) in case of accident

467 *emissivity*

ε	**ISO 16378:2013**	3.2	TC20/SC14/WG6

595 emissivity, emittance

$\varepsilon = M/M_b$

where M is the radiant exitance of a thermal radiator and Mb is the radiant exitance of a blackbody at the same temperature

[SOURCE: ISO 80000-7]

Note 1 to entry: The following adjectives should be added to define the conditions.

- Total: If they are related to the entire spectrum of thermal radiation (this designation can be considered as implicit) [ISO 9288:1989]
- Spectral or monochromatic: If they are related to a spectral interval centered on the wavelength λ [ISO 9288:1989]
- Hemispherical: If they are related to all directions along which a surface element can emit or receive radiation [ISO 9288:1989]
- Directional: If they are related to the directions of propagation defined by a solid angle around the defined direction [ISO 9288:1989]
- Normal: If they are related to the normal direction of propagation or incidence to the surface

EXAMPLE Total hemispherical emittance/emissivity.

Total hemispherical exitance M of the considered surface divided by the total hemispherical exitance M0 of the blackbody at the same temperature.

[SOURCE: ISO 9288:1989]

Note 2 to entry: When there is a certain need to distinguish a property of a material from a property of a real object, the word "emissivity" could be used. Emissivity is a property of a material measured as the emittance of an ideal material that is completely opaque and has an optically smooth surface.

Emissivity depends on the temperature at which it is determined and wavelength range. Emittance is a property of a particular object. It is determined by material emissivity, surface roughness, oxidation, the sample's thermal and mechanical history, surface finish, and measured wavelength range. Although emissivity is a major component in determining emittance, the emissivity determined under laboratory conditions seldom agrees with actual emittance of a certain sample.

$$\varepsilon = \int_0^\infty L_b(\lambda,T)\varepsilon(\lambda)d\lambda \Big/ \int_0^\infty L_b(\lambda,T)d\lambda$$

where

$L_{b,}(\lambda,T)$ Spectral Planck distribution of blackbody radiation, $c_1 \lambda^{-5} (e^{(c_2/\lambda T)}-1)^{-1}$;

C_1 $3{,}741\,77 \times 10^{-16}$ W·m²;

C_2 $1{,}438\,8 \times 10^{-2}$ m·K;

T absolute temperature, K;

λ wavelength, m;

$\int_0^\infty L_b(\lambda,T)d\lambda$ $\sigma\pi^{-1}T^4$;

σ Stefan-Boltzmann constant, 5,670 400 (40) × 10^{-8} [W·m^{-2}·K^{-4}].

ε	**ISO 16691:2014**	3.1.6	TC20/SC14/WG6

596 emissivity
emittance
ε=M/Mb
where M is the radiant exitance of a thermal radiator, and Mb is the radiant exitance of a blackbody at the same temperature
Note 1 to entry: The following adjectives should be added to define the conditions:
— Total: If they are related to the entire spectrum of thermal radiation (this designation can be considered as implicit);[7]
— Spectral or monochromatic: If they are related to a spectral interval centered on the wavelength λ;[7]
— Hemispherical: If they are related to all directions along which a surface element can emit or receive radiation;[7]
— Directional: If they are related to the directions of propagation defined by a solid angle around the defined direction;[7]
— Normal: If they are related to the normal direction of propagation or incidence to the surface.[7]
[SOURCE: ISO 80000-7:2008]
[SOURCE: ISO 16378]

468 *emittance*

597 emissivity, emittance

ε = M/Mb

where M is the radiant exitance of a thermal radiator and Mb is the radiant exitance of a blackbody at the same temperature

[SOURCE: ISO 80000-7]

Note 1 to entry: The following adjectives should be added to define the conditions.

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Total hemispherical exitance M of the considered surface divided by the total hemispherical exitance M0 of the blackbody at the same temperature.

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Note 2 to entry: When there is a certain need to distinguish a property of a material from a property of a real object, the word "emissivity" could be used. Emissivity is a property of a material measured as the emittance of an ideal material that is completely opaque and has an optically smooth surface.

Emissivity depends on the temperature at which it is determined and wavelength range. Emittance is a property of a particular object. It is determined by material emissivity, surface roughness, oxidation, the sample's thermal and mechanical history, surface finish, and measured wavelength range. Although emissivity is a major component in determining emittanee, the emissivity determined under laboratory conditions seldom agrees with actual emittance of a certain sample.

$$\varepsilon = \int_0^\infty Lb\,(\lambda,T)\varepsilon\,(\lambda)d\lambda / \int_0^\infty Lb\,(\lambda,T)d\lambda$$

where

Lb,(λ,T) Spectral Planck distribution of blackbody radiation, $c_1 \lambda^{-5} (e^{(c2/\lambda T)} - l)^{-1}$;

C1 3,741 77 × 10¬(-16) W·m²;

C2 1,438 8 × 10¯² m·K;

T absolute temperature, K;

λ wavelength, m;

$\int_0^\infty Lb\,(\lambda,T)d\lambda$ σπ¯¹T¬4;

σ Stefan-Boltzmann constant, 5,670 400 (40) × 10¬(-8) [W·m¯²·K¬(-4)].

ε **ISO 16691:2014** 3.1.6 TC20/SC14/WG6

598 emissivity
emittance
ε=M/Mb
where M is the radiant exitance of a thermal radiator, and Mb is the radiant exitance of a blackbody at the same temperature
Note 1 to entry: The following adjectives should be added to define the conditions:
— Total: If they are related to the entire spectrum of thermal radiation (this designation can be considered as implicit);[7]]
— Spectral or monochromatic: If they are related to a spectral interval centered on the wavelength λ;[7]
— Hemispherical: If they are related to all directions along which a surface element can emit or receive radiation;[7]
— Directional: If they are related to the directions of propagation defined by a solid angle around the defined direction;[7]
— Normal: If they are related to the normal direction of propagation or incidence to the surface.[7]
[SOURCE: ISO 80000-7:2008]
[SOURCE: ISO 16378]

469 *emulator*

ISO 16781:2013 2.3 TC20/SC14/WG1

599 prototype of the flight equipment, which has the identical input/output interfaces as the flight equipment and has similar operating behaviour

470 *encounter plane*

ISO/TR 16158:2013 3.4 TC20/SC14/WG3

600 plane normal to the relative velocity at the time of closest approach

471 *end item*

ISO 10795:2019 3.91 TC20/SC14/WG5

601 combination of parts, assemblies, accessories, and/or attachments integrated to form an equipment (3.93) unit that can accomplish a specific function (3.110) when used
Note 1 to entry: An end item is complete within itself and classified as such for purposes of separate manufacture, procurement, drawings, specification (3.227), storage, issue, maintenance (3.145), or use.

472 *end of life*

ISO 24113:2019 3.9 TC20/SC14/WG7

602 instant when a spacecraft (3.25) or launch vehicle orbital stage (3.13):
a) is permanently turned off (nominally as it completes its disposal phase (3.7)),
b) re-enters the Earth’s atmosphere, or
c) can no longer be controlled by the operator
Note 1 to entry: See Annex A.

473 *end of mission*

	ISO 24113:2019	3.10	TC20/SC14/WG7

603 instant when a spacecraft (3.25) or launch vehicle orbital stage (3.13):
a) completes the tasks or functions for which it has been designed, other than its disposal (3.5),
b) becomes non-functional as a consequence of a failure, or
c) is permanently halted through a voluntary decision
Note 1 to entry: See Annex A.

474 *end product*

	ISO 19826:2017	3.2	TC20/SC14/WG5

604 product in the assembled and completed state at which acceptance will take place

475 *end user*

	ISO 26871:2012	3.1.13	TC20/SC14/WG1

605 person who, or organization that, actually uses a product
NOTE The end user is not necessarily the owner or buyer

476 *energetic material*

	ISO 26871:2012	3.1.14	TC20/SC14/WG1

606 explosive, US
energetic material, GB
material which is capable of undergoing an explosion when subjected to heat, impact, friction, detonation or other suitable initiation

477 *energy fluence*

	ISO 15856:2010	3.1.6	TC20/SC14/WG4

607 total energy of ionizing radiation per unit area of the irradiated surface
NOTE Energy fluence is measured in joules per square metre.

478 *energy spectrum*

Fi(E)	**ISO 15390:2004**	2.4	TC20/SC14/WG4

608 energy distribution of cosmic ray particle fluxes

479 *engine adjustment*

	ISO 17540:2016	2.36 Test technology 2.36.2	TC20/SC14/WG2

609 installation of engine regulatory elements for the purpose of a specified operating mode support

480 *engine altitude characteristic*

	ISO 17540:2016	2.7 General parameters and performance of engine 2.7.32	TC20/SC14/WG2

610 dependence of the thrust rocket engine on the environment pressure at constant values of the ratio of the propellant components and the pressure in the chamber (2.2.1)

481 ***engine blow***

ISO 17540:2016	2.36 Test technology 2.36.4	TC20/SC14/WG2

611 removal of combustion products, gas generation products, atmospheric air and engine internal cavity fuel by gas with excess pressure

482 ***engine cavity passivation***

ISO 17540:2016	2.36 Test technology 2.36.6	TC20/SC14/WG2

612 engine cavity surface processing which results in the formation of a material film that does not act on fuel components and is inert to their aggressive action to engine cavities

483 ***engine cut-off***

ISO 17540:2016	2.10 Engine operation modes 2.10.8	TC20/SC14/WG2

613 engine operation (2.10.1) from the cut-off command up to when the thrust disappears

484 ***engine designated resource***

ISO 17540:2016	2.8 Engine time characteristics, types of operating and resources 2.8.8	TC20/SC14/WG2

614 total operating time after the expiry of which the use of the engine should be stopped

485 ***engine emergency cut-off***

ISO 17540:2016	2.10 Engine operation modes 2.10.11	TC20/SC14/WG2

615 engine cut-off caused by a failure of the engine, the propulsion system, the test stand systems or the vehicle systems

486 ***engine experimental-design developing***

ISO 17540:2016	2.27 Engine tests: General 2.27.2	TC20/SC14/WG2

616 experimental-design development that includes investigation tests of the engine and its component prototypes, design and technological documentation updating by test results, and completing development tests (2.34.3) and interagency tests of prototypes made of updated documentation

487 ***engine failure***

	ISO 17540:2016	2.41 Engine failure modes 2.41.1	TC20/SC14/WG2

617 event based on the breach of engine operable state or its non-operable state (2.39.3) detection during test or operation

488 *engine fault detection*

	ISO 17540:2016	2.36 Test technology 2.36.7	TC20/SC14/WG2

618 engine dismantling and technical condition research after test for the purpose of defect detection

489 *engine final design*

	ISO 17540:2016	2.46 Structural and functional analysis of reliability 2.46.5	TC20/SC14/WG2

619 engine design suffices the design documentation requirements until the moment of reliability analysis implementation

490 *engine final mode*

	ISO 17540:2016	2.10 Engine operation modes 2.10.9	TC20/SC14/WG2

620 setting of the engine before stopping with a thrust with less traction on the main mode

491 *engine firing*

	ISO 17540:2016	2.10 Engine operation modes 2.10.4	TC20/SC14/WG2

621 engine operation (2.10.1) from the firing command up to when the specified mode is reachec

492 *engine impulse*

	ISO 17540:2016	2.7 General parameters and performance of engine 2.7.14	TC20/SC14/WG2

622 time integral of engine thrust

493 *engine main mode*

	ISO 17540:2016	2.10 Engine operation modes 2.10.3	TC20/SC14/WG2

623 mode engine is in when a major problem is carried

494 *engine manufacturing failure*

	ISO 17540:2016	2.41 Engine failure modes 2.41.3	TC20/SC14/WG2

624 engine failure (2.41.1) based on manufacturing defect (2.40.2)

495 *engine neutralization*

	ISO 17540:2016	2.36 Test technology 2.36.5	TC20/SC14/WG2

625 engine processing for the remaining fuel removal and/or clearance of unremoved remaining fuel

496 *engine operating conditions*

	ISO 17540:2016	2.42 Engine operation 2.42.1	TC20/SC14/WG2

626 set of conditions specified by the design documentation for engine operating

497 *engine operating failure*

	ISO 17540:2016	2.41 Engine failure modes 2.41.4	TC20/SC14/WG2

627 engine failure (2.41.1) based on operating defect (2.40.3)

498 *engine operating time*

	ISO 17540:2016	2.8 Engine time characteristics, types of operating and resources 2.8.3	TC20/SC14/WG2

628 operation duration and/or operation cycle number of the engine

499 *engine operation*

	ISO 17540:2016	2.10 Engine operation modes 2.10.1	TC20/SC14/WG2

629 engine operating for thrust creating or changing its value and/or for providing the operation conditions of the vehicle components in accordance with the engine requirements

500 *engine operation mode*

	ISO 17540:2016	2.10 Engine operation modes 2.10.2	TC20/SC14/WG2

630 set of the engine parameter values defined by the processes occurring in the engine

501 *engine preview mode*

	ISO 17540:2016	2.10 Engine operation modes 2.10.7	TC20/SC14/WG2

631 setting of the engine thrust with less traction on the main mode
Note 1 to entry: Advance regime is part of the launching engine.

502 *engine reactive force*

	ISO 17540:2016	2.7 General parameters and performance of engine 2.7.12	TC20/SC14/WG2

632 gas and fluid flow resultant force acting on the thrust chamber internal surfaces resulting from the combustion gases

503 *engine reliability*

	ISO 17540:2016	2.39 Engine reliability 2.39.1	TC20/SC14/WG2

633 engine property to maintain an operable state (2.39.2) under determined operational conditions

504 *engine single working resource*

	ISO 17540:2016	2.8 Engine time characteristics, types of operating and resources 2.8.7	TC20/SC14/WG2

634 work resource of engines, or part thereof, during one cycle operation

505 *engine specified resource*

	ISO 17540:2016	2.8 Engine time characteristics, types of operating and resources 2.8.5	TC20/SC14/WG2

635 engine operating time (2.8.3) specified in the request for the proposal

506 *engine steady-state mode*

	ISO 17540:2016	2.10 Engine operation modes 2.10.5	TC20/SC14/WG2

636 engine operation mode (2.10.2) where the mean thrust and mixture ratio values remain constant

507 *engine structural failure*

	ISO 17540:2016	2.41 Engine failure modes 2.41.2	TC20/SC14/WG2

637 engine failure (2.41.1) based on structural defect (2.40.1)

508 *engine structural-functional scheme*

	ISO 17540:2016	2.46 Structural and functional analysis of reliability 2.46.3	TC20/SC14/WG2

638 engine configuration represented as structural-functional elements (2.46.2)

509 *engine test*

	ISO 17540:2016	2.27 Engine tests: General 2.27.1	TC20/SC14/WG2

639 test for engine technical conditions assessment or its research processes

510 *engine test complex*

	ISO 17540:2016	2.47 Test stands: General 2.47.2	TC20/SC14/WG2

640 integration of engine test stand (2.47.1) and constructions needed to perform incoming control and post-launch activities
Note 1 to entry: The test complex may include a number of stands integrated by common constructions for input control and post-launch activity.

511 *engine test stand*

	ISO 17540:2016	2.47 Test stands: General 2.47.1	TC20/SC14/WG2

641 technical construction designed for the test

512 *engine thermal state*

	ISO 17540:2016	2.26 Engine thermal protectin 2.26.2	TC20/SC14/WG2

642 engine condition characterized by a set of temperatures at its various points

513 *engine thermostating*

	ISO 17540:2016	2.36 Test technology 2.36.3	TC20/SC14/WG2

643 reduction of the engine (fuel components) temperature to a specified value and its maintenance in that range for a set time interval

Note 1 to entry: The engine thermostating may be performed in combination with the fuel component thermostatic or separately.

514 *engine throttle characteristic*

	ISO 17540:2016	2.7 General parameters and performance of engine 2.7.33	TC20/SC14/WG2

644 dependence of the engine thrust from the chamber pressure at constant values of the mixture ratio (2.7.5) of propellants and the ambient pressure

515 *engine thrust*

	ISO 17540:2016	2.7 General parameters and performance of engine 2.7.13	TC20/SC14/WG2

645 resultant of the engine reactive force (2.7.12) and the environment pressure forces acting on the engine external surfaces (excluding external aerodynamic drag forces)

516 *engine unsteady mode*

	ISO 17540:2016	2.10 Engine operation modes 2.10.6	TC20/SC14/WG2

646 engine operating mode where the average thrust or the ratio of propellant components varies in time

517 *engine verification time*

	ISO 17540:2016	2.8 Engine time characteristics, types of operating and resources 2.8.4	TC20/SC14/WG2

647 mean time engine specified in the request for the proposal

518 *engine with afterburning*

	ISO 17540:2016	2.3 Engine types by way of work process 2.3.1	TC20/SC14/WG2

648 engine where gas generation products after their use are used to drive the turbo-pump (2.2.2) assembly

519 *engine without afterburning*

	ISO 17540:2016	2.3 Engine types by way of work process 2.3.2	TC20/SC14/WG2

649 engine where gas generation products after their use to drive the turbo-pump (2.2.2) assembly are released into the environment
Note 1 to entry: Engine without afterburning have a pump (2.20.1) or a pressurized fuel supply.

520 *engine working resource*

	ISO 17540:2016	2.8 Engine time characteristics, types of operating and resources 2.8.6	TC20/SC14/WG2

650 total running engine during a specified period of service, used as directed

521 *Engineering Model*

	ISO 14200:2012	3.1	TC20/SC14/WG4

651 environment model that provides clear and concise information that engineers need

522 *envelope lifetime*

	ISO 14622:2000	2.11.1	TC20/SC14/WG1

652 lifetime of a structure determined on the basis of the structure having been subjected to the most unfavourable combination of events (load cycles, thermal cycles, etc.)

523 *environment*

	ISO 10795:2019	3.92	TC20/SC14/WG5

653 natural conditions and induced conditions that constrain the design (3.82, 3.83) definitions or operations of a product (3.173)
Note 1 to entry: Examples of natural conditions are weather, climate, ocean conditions, terrain, vegetation, dust, light and radiation.
Note 2 to entry: Examples of induced conditions are electromagnetic interference, heat, vibration, pollution and contamination (3.62).
[SOURCE: EN 16601-00-01:2015, 2.3.78]

	ISO 21351:2005	3.1.2, 3.1.3, 3.1.4	TC20/SC14/WG5

654 3.1.2
environment, noun
<product> natural conditions (such as weather, climate, ocean conditions, terrain, vegetation, dust, light and radiation) and induced conditions (such as electromagnetic interference, heat, vibration, pollution and contamination) that constrain the design definitions for end products and their enabling products
3.1.3
environment, noun
<project> external factors affecting an enterprise or project
3.1.4
environment, noun
<development> external factors affecting development tools, methods, or processes

524 *environment adaptability*

ISO 18257:2016	3.3	TC20/SC14/WG1

655 ability to achieve the entire product's intended functions, performance and (or) capacity for protecting itself under various environments within its life cycle

525 *equilibrium flow*

ISO 17540:2016	2.19 Flow in nozzle 2.19.1	TC20/SC14/WG2

656 flow in the nozzle (2.12.16) characterized by power, chemical and phase balance of the combustion products

526 *equipment*

ISO 10795:2019	3.93	TC20/SC14/WG5

657 equipment
unit

integrated set of parts, and components (3.48)
Note 1 to entry: An equipment accomplishes a specific function (3.110).
Note 2 to entry: An equipment is self-contained and classified as such for the purposes of separate manufacture, procurement, drawings, specification (3.227), storage, issue, maintenance (3.145), or use.
[SOURCE: EN 16601-00-01:2015, 2.3.79]

ISO 14302:2002	3.1.6	TC20/SC14/WG1

658 equipment/subsystem
any electrical, electronic, or electromechanical device or integration of such devices intended to operate as an individual unit and performing a specific set of functions
NOTE Generally, a piece of equipment is housed within a single enclosure, while a subsystem may consist of several interconnected units.

527 *equipment under test*

ISO 21494:2019	3.1	TC20/SC14/WG2

659 EUT object under the magnetic test on system, subsystem or unit level generally

528 *error*

ISO 10795:2019	3.94	TC20/SC14/WG5

660 discrepancy (3.87) between a computed, observed or measured value or condition and the true, specified or theoretically correct value or condition
Note 1 to entry: An error can be caused by a faulty item (3.134), e.g. a computing error made by faulty computer equipment (3.93).
Note 2 to entry: The definition is from Reference [32].

529 *estimate at completion*

ISO 10795:2019	3.95	TC20/SC14/WG5

661 sum of costs incurred up to the cut-off date and the respective estimate to completion (3.96)

530 *estimate to completion*

	ISO 10795:2019	3.96	TC20/SC14/WG5

662 estimate of all costs from the cut-off date required to deliver the product (3.173), based on the work to be completed and approved anticipated contract (3.65) changes (3.39)

531 *estimated properties*

	ISO 22010:2007	3.6	TC20/SC14/WG1

663 mass properties determined from preliminary data, such as sketches or calculations from layout drawings

532 *evaluation*

	ISO 10795:2019	3.97	TC20/SC14/WG5

664 systematic process (3.171) of determining how well individuals, procedures (3.170), systems (3.234) or programs have met formally agreed objectives and requirements (3.201)

533 *Executive Head*

	ISO 20892:2018	3.6	TC20/SC14/WG5

665 <modernization>organization that makes a contract with a customer (3.5) of the complex, coordinates the work of subcontractors (3.8) and is responsible for the implementation of launch complex
modernization (3.1)

534 *exhaust velocity*

	ISO 17540:2016	2.7 General parameters and performance of engine 2.7.11	TC20/SC14/WG2

666 velocity of exhaust stream through the nozzle (2.12.16) or a reaction engine, relative to the nozzle

535 *Exosphere*

	ISO 14222:2013	2.4	TC20/SC14/WG4

667 region of the atmosphere that extends from the top of the thermosphere outward

536 *exothermic reaction*

	ISO 14624-6:2006	3.4	TC20/SC14/WG6

668 chemical reaction that generates heat

537 *expanded specifications*

	ISO 21350:2007	3.7	TC20/SC14/WG5

669 specification of OTS item in which the environment requirements are different from the vendor specification and the design of the OTS item has not been changed

538 *expected number of casualties*

	ISO 24113:2019	3.3	TC20/SC14/WG7

670 casualty risk
expected number of casualties

situation expressed by the probability that at least one person is killed or seriously injured as a consequence of an event
Note 1 to entry: The medical profession has defined a number of different injury scoring systems to distinguish the severity of an injury. Broadly, a serious injury is one of such severity that hospitalisation is required.
Note 2 to entry: The re-entry (3.22) of a spacecraft (3.25) is an example of an event.

539 *expected number of casualty*

Ec	**ISO 27875:2019**	3.2	TC20/SC14/WG3

671 number of people who are predicted to be killed or seriously injured by an event
Note 1 to entry: The calculation of Ec is complex. Organizations use different processes to estimate Ec based on methods deemed applicable by the organizations. (see 5.5.1 and Annex C).

540 *expendable engine*

	ISO 17540:2016	2.4 Engine types by multiplicity of use and integration 2.4.1	TC20/SC14/WG2

672 engine intended for a specific purpose and used only one time

541 *expert judgment*

	ISO 11231:2019	3.1.2	TC20/SC14/WG5

673 systematic and structured elicitation of probability data through the estimation and assessment by specialists
Note 1 to entry: “Structured” implies the use of a method; “systematic” means regularly.
Note 2 to entry: Mathematical aggregation of individual judgments is generally preferred over behavioural or consensus aggregation.

542 *explosion*

	ISO 17546:2016	3.10	TC20/SC14/WG1

674 condition that occur when a cell container or battery case violently opens and major components are forcibly expelled and the cell or battery casing is torn or split [9][11]

[9] IEC 62133, Secondary cells and batteries containing alkaline or other non-acid electrolytes -
Safety requirements for portable sealed secondary cells, and for batteries made from them, for use
in portable applications
[11] UL1642. UL Standard for Safety for Lithium Batteries”

543 *explosive*

	ISO 26871:2012	3.1.14	TC20/SC14/WG1

675 explosive, US
energetic material, GB
material which is capable of undergoing an explosion when subjected to heat, impact, friction, detonation or other suitable initiation

544 ***explosive actuator***

ISO 26871:2012	3.1.15	TC20/SC14/WG1

676 mechanism that converts the products of explosion into useful mechanical work

545 ***explosive component***

ISO 26871:2012	3.1.16	TC20/SC14/WG1

677 any discrete item containing an explosive substance

546 ***explosive function***

ISO 26871:2012	3.1.17	TC20/SC14/WG1

678 any function that uses energy released from explosive substances for its operation

547 ***explosive system***

ISO 26871:2012	3.1.18	TC20/SC14/WG1

679 collection of all the explosive trains on the spacecraft or launcher system, and the interface aspects of any on-board computers, launch operation equipment, ground support and test equipment and all software associated with explosive functions

548 ***explosive train***

ISO 26871:2012	3.1.19	TC20/SC14/WG1

680 series of explosive components, including initiating and igniting elements, explosive transfer assembly and explosive actuator, arranged to realise the pyro effect required

549 ***explosive-ordnance device***

ISO 24917:2010	3.36	TC20/SC14/WG2

681 device that contains explosives or is operated by explosives
NOTE A cartridge actuated device, one type of explosive device, is a mechanism that employs the energy produced by an explosive charge to perform or initiate a mechanical action.

550 ***extending nozzle***

ISO 17540:2016	2.15 Nozzle types 2.15.8	TC20/SC14/WG2

682 sliding nozzle
nozzle (2.12.16) with one or several sliding attachments which are nozzle expanding part continuation in extended position

551 ***external cooling***

ISO 17540:2016	2.25 Engine cooling 2.25.1	TC20/SC14/WG2

683 heat removal from engine design elements to cooler or environment

552 ***external magnetic field***

	ISO 17520:2016	2.3	TC20/SC14/WG4

684 external (magnetospheric) magnetic field
magnetic field produced by magnetospheric sources
Note 1 to entry: It can be described by different models, e.g. Tsyganenko-89 [3] and more recent models.[4][5]

	ISO 22009:2009	2.2	TC20/SC14/WG4

685 ⟨magnetospheric magnetic field⟩ magnetic field produced by magnetospheric sources of magnetic field

553 *external mechanical loading*

	ISO 14953:2000	2.1	TC20/SC14/WG1

686 system of forces and moments external to a structure and brought to bear on that structure

554 *external short circuit*

	ISO 17546:2016	3.11	TC20/SC14/WG1

687 direct connection between positive and negative terminals of a cell or battery that provides less than 0,1 ohm resistance path for current flow [6].
Note 1 to entry: An external short circuit occurs when a direct connection between the positive and negative terminals is made where the connection resistance is sufficiently low enough to higher
than rated current flow through the cell.

[6] ST/SG/AC. 10/11/Rev.5/Amend.1, “United Nations Transport of Dangerous Goods UN Manual of Tests and Criteria, Part III, sub-section 38.3 Fifth revised edition Amendment 1”

555 *Extravehicular activity*

EVA	**ISO 16157:2018**	3.6	TC20/SC14/WG6

688 spacesuited activities outside MSC

EVA	**ISO 16726:2018**	3.6	TC20/SC14/WG6

689 spacesuited activities outside MSC
[SOURCE: ISO 16157, 3.6]

556 *Extremal fluxes*

Extremal	*E*	**ISO/TR 18147:2014**	2	TC20/SC14/WG4

690 Extremal fluxes (fluences or peak fluxes)
Fluxes, sizes that exceed probability 0,01 or occurred above the 0,99 confidence level.

557 *extremal nozzle contour*

	ISO 17540:2016	2.16 Nozzle items 2.16.2	TC20/SC14/WG2

691 shaped nozzle contour (2.16.1) whose expanding part is determined by various methods

558 *extreme envelope*

	ISO 26871:2012	3.1.20	TC20/SC14/WG1

692 positive margin over the conditions of the qualification envelope
NOTE The device or system design is based on the conditions that define the extreme envelope

559 *extremely rare event*

	ISO 12208:2015	2.2	TC20/SC14/WG4

693 a solar energetic proton (SEP) event that occurs about once in a solar cycle and whose fluence dominates that for the entire cycle
Note 1 to entrry: Examples are those which took place in August 1972, October 1989 and July 2000.

560 *F10.7*

F10	**ISO/TS 21979:2018**	3.5	TC20/SC14/WG4

694 traditional solar energy proxy that is used on atmosphere models
Note 1 to entry: Measure of the solar radio flux at a wavelength of 10,7 cm at Earth's orbit, given in units of 10-22 W•m-2.

561 *factor of safety*

	ISO 10785:2011	3.11	TC20/SC14/WG1

695 design safety factor
design factor of safety
factor of safety

multiplying factor to be applied to the limit load and/or maximum expected operating pressure (MEOP) or maximum design pressure (MDP) [3.20]
[ISO 14623:2003, definition 2.17]

	ISO 14623:2003	2.17	TC20/SC14/WG1

696 design safety factor (preferred term)
design factor of safety (admitted term)
factor or safety (admitted term)

multiplying factor to be applied to the limit load and/or MEOP(or MDP)

	ISO 21347:2005	3.9	TC20/SC14/WG1

697 design safety factor (preferred term)
design factor of safety (admitted term)
factor of safety (admitted term)
multiplying factor to be applied to the limit load and/or maximum expected operating pressure (MEOP), or maximum design pressure (MDP), for the purpose of analytical assessment and/or test verification of structural adequacy
EXAMPLE The design burst factor applied to the MEOP is the required design burst pressure for analysis or test.

	ISO 24638:2008	3.9	TC20/SC14/WG1

698 design safety factor (preferred term)
design factor of safety (admitted term)
factor of safety (admitted term)

multiplying factor to be applied to limit loads and/or maximum expected operating pressure (or maximum design pressure)

562 ***fading***

ISO 17546:2016	3.12	TC20/SC14/WG1

699 degradation of electrical performances due to cycling.
Note 1 to entry: It is evaluated through life test and wear out test.

563 ***Fail safe***

ISO 14620-1:2018	3.1.8	TC20/SC14/WG5

700 design property of an item which prevents its failures from resulting in critical faults
[SOURCE: IEC 60050:1992]

564 ***fail-safe structure***

ISO 10786:2011	3.20	TC20/SC14/WG1

701 structural item for which it can be shown by analysis or test that, as a result of structural redundancy, the structure remaining after the failure of any element of the structural item can sustain the redistributed limit load, with an ultimate safety factor of 1,0
[ISO 21347:2005]

ISO 21347:2005	3.10	TC20/SC14/WG1

702 structural item for which it can be shown by analysis or test that, as a result of structural redundancy, the structure remaining after the failure of any element of the structural item can sustain the redistributed limit loads with an ultimate safety factor of 1,0
NOTE It also can be shown that the structural item can withstand the fatigue loads for all the mission life for multi-mission applications.

565 ***failure***

ISO 10795:2019	3.98	TC20/SC14/WG5

703 termination of the ability of an item (3.134) to perform a required function (3.110)
[SOURCE: ISO 14620-1:2018, 3.1.9]

ISO 14620-1:2018	3.1.9	TC20/SC14/WG5

704 termination of the ability of an item to perform a required function
[SOURCE: IEC 60050:1992]

ISO 16159:2012	2.4	TC20/SC14/WG3

705 termination of the ability of an item to perform the function for which it was designed
[ISO 14620-2:2011, definition 3.5]

566 ***failure analysis***

ISO 16159:2012	2.5	TC20/SC14/WG3

706 systematic approach to determine, as a minimum, the mode and mechanism of failure via investigative techniques, in order to identify and assess potential root causes and ultimately arrive at the most probable, and to identify and assess potential corrective actions and ultimately recommend/implement the most suitable
NOTE Investigative techniques can range from examination in the field to evaluation in the laboratory.

567 ***failure load***

	ISO 14622:2000	2.5.10	TC20/SC14/WG1

707 load determined experimentally and for which the structure fails, collapses through instability or exhibits excessive deformation

568 *failure mode*

	ISO 10786:2011	3.19	TC20/SC14/WG1

708 rupture, collapse, detrimental deformation, excessive wear or any other phenomenon resulting in an inability to sustain loads, pressures and corresponding environments, or that jeopardizes mission success
NOTE This definition applies to structural failure.

	ISO 10795:2019	3.99	TC20/SC14/WG5

709 rupture, collapse, detrimental deformation, excessive wear or any other phenomenon resulting in an inability to sustain loads, pressures and corresponding environments (3.92), or that jeopardizes mission (3.154) success
[SOURCE: ISO 10786:2011, 3.19, modified – NOTE has been removed.]

569 *failure mode effects and critically analysis*

FMECA	**ISO 10786:2011**	3.22	TC20/SC14/WG1

710 analysis performed to systematically evaluate the potential effect of each functional or hardware failure on mission success, personnel and system safety, system performance, maintainability and maintenance requirements
NOTE It is also used to rank by the severity of its effect.

570 *failure precondition*

	ISO 16159:2012	2.7	TC20/SC14/WG3

711 pre-existing conditions and circumstances that predispose a component to failure
NOTE Failure preconditions can include improper design, manufacture or service.

571 *failure scenario*

	ISO 23460:2011	3.1	TC20/SC14/WG5

712 conditions and sequence of events leading from the initial root cause to an end failure

572 *failure tolerance*

	ISO 10795:2019	3.100	TC20/SC14/WG5

713 attribute of an item (3.134) that makes it able to perform a required function (3.110) in the presence of certain given sub-item failures (3.98)
[SOURCE: EN 16601-00-01:2015, 2.3.83]

573 *failure-free operation*

	ISO 17540:2016	2.42 Engine operation 2.42.3	TC20/SC14/WG2

714 operating when the engine keeps its operable state (2.39.2) during its storing, transportation and intended use
Note 1 to entry: Failure-free operation of reusable engines includes the recovery of an engine operable state during period of time between its fights not exceeding the specified time.

574 ***fairing***

	ISO 24917:2010	3.7	TC20/SC14/WG2

715 technical device intended for protection of a space vehicle or of a space nose section from external influences at transportation of the space launch vehicle on a launcher and on a start of the space launch vehicle and on a trajectory of launching into an orbit of a space vehicle

575 ***false alarm***

	ISO/TR 16158:2013	3.5	TC20/SC14/WG3

716 statistical Type I error, when a statistical test fails to reject a false null hypotesis

576 ***fatigue***

	ISO 10785:2011	3.13	TC20/SC14/WG1

717 process of progressive localized permanent structural change occurring in a material/structure subjected to conditions which produce fluctuating stresses and strains at some point or points and which may culminate in cracks or complete fracture after a sufficient number of fluctuations
[ISO 14623:2003, definition 2.23]

	ISO 14623:2003	2.23	TC20/SC14/WG1

718 process of progressive localized permanent structural change occurring in a material/structure subjected to conditions which produce fluctuating stresses and strains at some point or points and which may culminate in cracks or complete fracture after a sufficient number of fluctuations

577 ***fatigue life***

	ISO 10785:2011	3.14	TC20/SC14/WG1

719 number of cycles of stress or strain of a specified character that a given structure or component of a structural assembly can sustain (without the presence of flaws) before failure of a specified nature occurs
NOTE Adapted from ISO 14623:2003, definition 2.24.

	ISO 10786:2011	3.21	TC20/SC14/WG1

720 number of cycles of stress or strain of a specified character that a given structure or component of a structural assembly can sustain (without the presence of flaw) before failure of a specified nature could occur

	ISO 14623:2003	2.24	TC20/SC14/WG1

721 number of cycles of stress or strain of a specified character that a given material or structure can sustain before failure of a specified nature could occur

	ISO 21648:2008	2.1.11	TC20/SC14/WG1

722 number of load cycles experienced in service that a defect-free part in a flywheel module can sustain before failure of a specified nature could occur
NOTE The number of load cycles experienced in service can be flight loads, ground test loads and charge/discharge cycles.

578 ***fault***

	ISO 10795:2019	3.101, 3.102	TC20/SC14/WG5

723 <state> the state of an item (3.134) characterized by inability to perform as required, excluding the inability during preventative maintenance (3.145) or other planned actions (3.9), or due to lack of external resources
Note 1 to entry: A fault is often the result of a failure (3.98) of the item itself, but can exist without prior failure.
[SOURCE: ISO 14620-1:2018, 3.1.10]

<event> an unplanned occurrence or defect (3.79) in an item (3.134) which may result in one or more failures (3.98) of the item itself or of other associated equipment (3.93)
Note 1 to entry: An item may contain a sub-element fault, which is a defect that can manifest itself only under certain circumstances. When those circumstances occur, the defect in the sub-element will cause the item to fail, resulting in an error (3.94). This error can propagate to other items causing them, in turn, to fail. After the failure occurs, the item as a whole is said to have a fault or to be in a faulty state.
[SOURCE: ISO 14620-1:2018, 3.1.11]

	ISO 14620-1:2018	3.1.10, 3.1.11	TC20/SC14/WG5

724 fault, noun
<state> the state of an item characterized by inability to perform as required, excluding the inability during preventative maintenance or other planned actions, or due to lack of external resources
Note 1 to entry: A fault is often the result of a failure of the item itself, but can exist without prior failure.
[SOURCE: Adapted from IEC 60050:1992]

fault, noun
<event> an unplanned occurrence or defect in an item which may result in one or more failures of the item itself or of other associated equipment
Note 1 to entry: An item may contain a sub-element fault, which is a defect that can manifest itself only under certain circumstances. When those circumstances occur, the defect in the sub-element will cause the item to fail, resulting in an error. This error can propagate to other items causing them, in turn, to fail. After the failure occurs, the item as a whole is said to have a fault or to be in a faulty state (3.1.10).
[SOURCE: IEC 60050:1992, modified — Note 1 to entry from EN 13701:2001]

579 *fault tolerance*

	ISO 10795:2019	3.103	TC20/SC14/WG5

725 <design property of a system> fault (3.101, 3.102) masking (deprecated in this sense) ability to continue functioning with certain faults present
Note 1 to entry: In French, the adjective “fault tolerant” is used in this sense.

580 *fault tree analysis*

FTA	**ISO 10795:2019**	3.104	TC20/SC14/WG5

726 analysis (3.12) using logic diagram showing the faults (3.101, 3.102) of sub-items, external events, or combinations thereof, that result in a predefined, undesired event

581 *faying surface*

	ISO 14302:2002	3.1.7	TC20/SC14/WG1

727 prepared conductive surface of sufficient area and conductivity that, when joined under pressure contact, ensures a low electrical bond impedance for the required life of the connection

582 *feedback control*

	ISO 19924:2017	3.15	TC20/SC14/WG2

728 closed-loop control
feedback control

system where the output acts upon the process in such a way as to reduce the difference between the
measured value and the desired set-point value to zero
[SOURCE: ISO 16484-2:2004, 3.41]

583 *Feret diameter*

	ISO 10788:2014	2.1.4	TC20/SC14/WG4

729 distance between two parallel lines which are tangent to the perimeter of a particle
Note 1 to entry: The maximum Feret diameter is defined as the greatest distance between two parallel lines which are still tangent to the perimeter of the particle.

584 *fibre*

	ISO 14952-1:2003	2.9	TC20/SC14/WG6

730 flexible structure having a length-to-width ratio of 10 to 1 or greater

	ISO 15388:2012	3.1.24	TC20/SC14/WG6

731 flexible structure having a length-to-width ratio of 10 to 1 or greater
[ISO 14952-1:2003, 2.9]

585 *fibre alignment dislocation*

	ISO 20780:2018	3.1.9	TC20/SC14/WG1

732 misalignment between the fibre tip and optic chip (or crystal) facet

586 *fibre optic component*

	ISO 20780:2018	3.1.4	TC20/SC14/WG1

733 components that are based on optical fibre properties or components that are coupled with optical fibres that cannot be disassembled, including passive fibre optic components and active fibre optic components

587 *fidelity*

	ISO 16781:2013	2.4	TC20/SC14/WG1

734 degree to which a model or simulation reproduces the state and behavior of a real world object or the perception of a real world object, feature, condition, or chosen standard in a measurable or perceivable manner

588 *field cleaning*

	ISO 14952-1:2003	2.10	TC20/SC14/WG6

735 processes of rough cleaning (2.27) and precision cleaning (2.25) of components (2.4) and systems (2.30) which cannot be processed in a controlled environment such as a clean

589 *figure of merit*

	ISO 10788:2014	2.1.5	TC20/SC14/WG4

736 degree to which a sample matches a reference
Note 1 to entry: Scaling (normalization) forces the norm of the difference of two composition vectors to lie between O and 1, and subtraction from unity results in a figure of merit of 1 for a perfect match and 0 for not match at all.

590 *fill factor*

FF	**ISO 15387:2005**	3.11	TC20/SC14/WG1

737 ratio of maximum power to the product of open circuit voltage and short-circuit current
NOTE FF = Pmax/(Voc × Isc).

591 *film cooling*

	ISO 17540:2016	2.25 Engine cooling 2.25.6	TC20/SC14/WG2

738 reduction of heat flow, directed towards engine design elements, by creating a protective liquid or gas layer to their surface

592 *fire*

	ISO 17546:2016	3.13	TC20/SC14/WG1

739 flames are emitted from the test cell or battery [6] [9]

[6] ST/SG/AC. 10/11/Rev.5/Amend.1, “United Nations Transport of Dangerous Goods UN Manual of Tests and Criteria, Part III, sub-section 38.3 Fifth revised edition Amendment 1”
[9] IEC 62133, Secondary cells and batteries containing alkaline or other non-acid electrolytes —
Safety requirements for portable sealed secondary cells, and for batteries made from them, for use
in portable applications

593 *fire protection system*

	ISO 17540:2016	2.49 Stand systems 2.49.11	TC20/SC14/WG2

740 stand system (2.47.5) designed for extinguishing fires in a compartments and spaces stand

594 *firing compartment*

	ISO 17540:2016	2.52 Stand compartmen ts 2.52.1	TC20/SC14/WG2

741 stand building designed to house the engine and conduct fire tests of an engine or clusters of engines
Note 1 to entry: The firing compartment is an explosion-proof room, providing protection for personnel and related facilities in case of an emergency.

595 *firing test*

	ISO 17540:2016	2.28 Types of engine tests: Thermal loads 2.28.1	TC20/SC14/WG2

742 engine test (2.27.1) with fuel combustion or decomposition

596 *firmware*

ISO 10795:2019	3.105	TC20/SC14/WG5

743 hardware (3.119) that contains a computer program or data that cannot be changed in its user environment (3.92)
Note 1 to entry: The computer program and data contained in firmware are classified as software (3.217); the circuitry containing the computer program and data is classified as hardware.
[SOURCE: EN 16601-00-01:2015, 2.3.86]

597 *fittings*

ISO 24638:2008	3.11	TC20/SC14/WG1

744 pressure components of a pressurized system used to connect lines, other pressure components and/or pressure vessels within the system

598 *fixing*

ISO 18197:2015	3.1	TC20/SC14/WG1

745 determining the integer number of carrier phase waves when calculating the position by use of carrier phase measurement
Note 1 to entry: This should be distinguished from the case of determining the desired value by convergence of continuous quantities when calculating the position by use of pseudorange measurement

599 *flame deflector*

ISO 17540:2016	2.51 Stand system elements 2.51.19	TC20/SC14/WG2

746 gas deflector
part of a hot firing test stand to deflect the exhaust gas stream to a safer direction

600 *flammability*

ISO 10795:2019	3.106	TC20/SC14/WG5

747 measure of the ease with which a material (3.148) is set on fire
[SOURCE: EN 16601-00-01:2015, 2.3.87]

601 *flammable material*

ISO 14624-4:2003	3.2	TC20/SC14/WG6

748 a material is considered to be flammable at a specific pressure if at least one specimen burns more than 150 mm at that pressure

602 *flanged connection*

ISO 15389:2001	3.4 (Amendment 1)	TC20/SC14/WG3

749 connection at which halves of connectors (3.2) or couplings (3.3) are mated by means of flanges

603 *flashpoint*

	ISO 10795:2019	3.107	TC20/SC14/WG5

750 lowest temperature at which a material (3.148) gives off flammable vapour that, when mixed with the test (3.239) atmosphere and exposed to an ignition source, provides a non-self-sustaining flash

604 *flat-sat*

	ISO 19683:2017	3.1	TC20/SC14/WG1

751 table-sat
configuration where only units (3.4), sometimes bare circuit boards only, are laid out in atmosphere on a table while not being mounted to the satellite structure

605 *flaw*

	ISO 10785:2011	3.16	TC20/SC14/WG1

752 local discontinuity in a structural material
EXAMPLES Crack, cut, scratch, void, delamination disbond, impact damage and other kinds of mechanical damage.
NOTE Adapted from ISO 14623:2003, definition 2.25.

	ISO 10786:2011	3.23	TC20/SC14/WG1

753 local discontinuity in a structural material
EXAMPLES Crack, cut, scratch, void, delamination disbond, impact damage and other kinds of mechanical damage.
[ISO 21347:2005]

	ISO 14623:2003	2.25	TC20/SC14/WG1

754 local discontinuity in a structural material such as a scratch, notch or crack

	ISO 21347:2005	3.11	TC20/SC14/WG1

755 local discontinuity in a structural material
EXAMPLES Crack, delamination or debonding.

	ISO 21648:2008	2.1.12	TC20/SC14/WG1

756 local discontinuity in a structural material
EXAMPLE Crack, delamination, void.

606 *flaw shape*

	ISO 14623:2003	2.26	TC20/SC14/WG1

757 shape of a surface crack or corner crack
NOTE For a surface crack, the flaw shape is expressed as a/2c, where a is the crack depth and 2c is the crack length. For a corner crack, the flaw shape is expressed as a/c, where a is the crack depth and c is the crack length

607 *flexibility*

	ISO 14950:2004	3.1.4	TC20/SC14/WG3

758 capacity to configure and make optimum use of
- existing on-board functions,
- space-Earth communications links,
- any redundancy built into the design in order to meet reliability targets,

as well as the capacity to optimize mission products according to the mission events

608 *flight hardware lifting device*

ISO 14625:2007 3.1.4 TC20/SC14/WG3

759 structural or mechanical items between the crane hook and the flight vehicle interface that are used to lift the flight hardware
EXAMPLE Sling, cable, shackle, beam.

609 *flight model*

ISO 15864:2004 3.1.2 TC20/SC14/WG2

760 spacecraft, subsystem or unit model dedicated to be launched and operated in orbit and subjected to acceptance testing

ISO 19683:2017 3.2 TC20/SC14/WG1

761 satellite or unit model dedicated to launch and operate in orbit and subjected to acceptance testing

610 *flight operations*

ISO 10795:2019 3.108 TC20/SC14/WG5

762 all activities related to the planning, execution and evaluation (3.97) of the control of the space segment (3.221) when in orbit
[SOURCE: EN 16601-00-01:2015, 2.3.89]

611 *flight plan*

ISO 14620-2:2019 3.4 TC20/SC14/WG5

763 plan related to the in-flight launch (3.8) vehicle, including data directly or indirectly related to launch site (3.11) safety

612 *flight safety*

ISO 14620-2:2019 3.5 TC20/SC14/WG5

764 arrangements intended to control safety risks (3.19) from launch (3.8) through the flight of a space object (3.20), and to protect people, public and private property, and the environment, against any damage (3.2) that could be caused by in-flight manœuvres of this space object

613 *Flight Safety System*

ISO 14620-3:2005 3.1 TC20/SC14/WG5

765 combination of flight-, ground- or space-based hardware and software designed, installed and/or operated specifically for providing flight safety
NOTE 1 This combination of equipment, facilities, procedures and personnel required to monitor operations provides protection to personnel and property both foreign and domestic from any damage that may be caused by a non-nominal flight.
NOTE 2 The flight safety system may include flight termination systems, telemetry data transmitting systems and range tracking systems.

614 *flight spare*

ISO 10795:2019 3.109 TC20/SC14/WG5

766 spare flight model (3.155) that could be used in place of the flight model
[SOURCE: EN 16601-00-01:2015, 2.3.90 modified – NOTE 1 and 2 has been removed.]

615 *flight termination system*

	ISO 14620-3:2005	3.2	TC20/SC14/WG5

767 explosive or other disabling or thrust-terminating equipment installed in a launch vehicle, plus any associated ground equipment, for terminating the flight of a malfunctioning vehicle or stage

616 *flight test*

	ISO 17540:2016	2.30 Types of engine tests: Test site 2.30.2	TC20/SC14/WG2

768 engine test (2.27.1) in a rocket in real operating conditions

	ISO 24917:2010	3.23	TC20/SC14/WG2

769 tests in real conditions of functioning and performance of target tasks

617 *flight-design test*

	ISO 17540:2016	2.31 Types of engine tests: Organizational factor and test site 2.31.1	TC20/SC14/WG2

770 developed or modernized engine test in a rocket in a real environment for the purpose of updating design and technological documentation

618 *flight-like test article*

	ISO 21648:2008	2.1.13	TC20/SC14/WG1

771 test article that is built in accordance with a fabrication process identical to the flight hardware

619 *flight-type hardware test*

	ISO 16454:2007	3.14	TC20/SC14/WG1

772 test of a flight structure article, a protoflight model, a representative special model or a structural element fabricated with the same or close to flight hardware technology

620 *flow rate tension*

	ISO 17540:2016	2.14 Operating process in chamber (gas generator) 2.14.7, 2.14.8	TC20/SC14/WG2

773 <in chamber> ratio of combustion products mass flow to the area of the chamber cross-section at the mixing system (2.12.3)

<in gas generator> ratio of gas generation products mass flow to the area of the gas generator cross¬section at the mixing system (2.12.4)

621 *flow-measuring meter*

	ISO 17540:2016	2.51 Stand system elements 2.51.10	TC20/SC14/WG2

774 element of the stand in the pipeline (2.51.6) that establishes a means of measuring the flow of the propellant supplied through this pipeline

622 *fluence*

	ISO 12208:2015	2.4	TC20/SC14/WG4

775 time-integrated flux

	ISO 21980:2020	3.3	TC20/SC14/WG4

776 time-integrated flux (3.2)
Note 1 to entry: Fluence is measured as the flux per unit area per unit time. This is used to express the environment during the operational lifetime of a spacecraft or space instrument. The integrated particles fluence unit is expressed as particles m−2. The energy integral fluence unit is expressed as particles m^{-2} MeV^{-1}. When the directional fluence is included, add per steradian (sr^{-1}).
[SOURCE: ISO 12208:2015, 2.4, modified — Note 1 to entry has been added.]

	ISO 23038:2018	3.4	TC20/SC14/WG1

777 total number of particles in any given time period given in units of particles per unit area
Note 1 to entry: Fluence is also known as time-integrated flux.

623 *fluid*

	ISO 14952-1:2003	2.11	TC20/SC14/WG6

778 gas or liquid

624 *flux*

	ISO 12208:2015	2.3	TC20/SC14/WG4

779 number of particles passing through a specific unit area per unit time

	ISO 21980:2020	3.2	TC20/SC14/WG4

780 number of particles passing through a specific unit area per unit time
[SOURCE: ISO 12208:2015, 2.3]

	ISO 23038:2018	3.3	TC20/SC14/WG1

781 number of particles passing through a given area in a specified time
Note 1 to entry: Flux may also be specified in terms of the number of particles per unit time passing through a unit area from source directions occupying a unit solid angle. Typical units are particles per cm^2 per second per steradian (sr) (1 sr is the solid angle subtended at the centre of a unit sphere by a unit area of the surface of the sphere).

625 *flywheel module*

FM **ISO 21648:2008** 2.1.14 TC20/SC14/WG1

782 assembly of mechanical parts which support and spin the flywheel rotor assembly and which house the appropriate sensors, rotor support systems and motor, which with the appropriate avionics suite and software can act as a stand-alone functional flywheel unit
NOTE A flywheel module typically includes the housing, main suspension system (magnetic or rolling element bearing, superconductor bearings), motor stator, caging mechanism, sensors and backup bearings, if applicable.

626 *flywheel rotor assembly*

FRA **ISO 21648:2008** 2.1.15 TC20/SC14/WG1

783 assembly in a flywheel which consists of rim, shaft and/or hub, bearings, motor generator rotor and other associated parts that rotate under normal operation

627 *forbidden telecommand*

ISO 14950:2004 3.2.25.1 TC20/SC14/WG3

784 Level A
telecommand that is not expected to be used for nominal or foreseeable contingency operations, that is included for unforeseen contingency operations, and that could cause irreversible damage if executed at the wrong time or in the wrong configuration

628 *forced test*

ISO 17540:2016 2.33 Types of engine tests: Accelerated data accessing 2.33.1 TC20/SC14/WG2

785 engine accelerated test based on the intensification of processes that cause failures or defects

629 *fracture*

ISO 10785:2011 3.15 TC20/SC14/WG1

786 type of failure mode in a material/structure which is generally preceded by a large amount of plastic deformation

630 *fracture control*

ISO 10786:2011 3.24 TC20/SC14/WG1

787 application of design philosophy, analysis methods, manufacturing technology, verification methodology, quality assurance, including non-destructive evaluation (NDE) and operating procedures to prevent premature structural failure caused by the presence and/or propagation of flaws during fabrication, testing, transportation, handling, and service events such as launch, in-orbit operation, and return

ISO 14623:2003 2.27 TC20/SC14/WG1

788 application of design philosophy, analysis method, manufacturing technology, verification methodology, quality assurance, and operating procedures to prevent premature structural failure caused by the propagation of cracks or crack-like flaws during fabrication, testing, transportation, handling and service

	ISO 21347:2005	3.12	TC20/SC14/WG1
789	application of design philosophy, analysis method, manufacturing technology, verification methodology, quality assurance, and operating procedures to prevent premature structural failure caused by the propagation of cracks or crack-like flaws during fabrication, testing, transportation, handling and service		
	ISO 21648:2008	2.1.17	TC20/SC14/WG1
790	application of design philosophy, analysis method, manufacturing technology, quality assurance and operating procedures to prevent premature structural failure caused by the propagation of cracks or crack-like flaws during fabrication, assembly, testing, transportation and ground-handling and service		

631 *fracture critical part*

	ISO 21648:2008	2.1.16	TC20/SC14/WG1
791	classification of a part for manned space systems, which assumes that fracture or failure of that part resulting from occurrence of a crack-like defect would create a catastrophic hazard NOTE Such classification is required on components unless it can be shown otherwise, i.e. if the part (and subsequent parts it could fail) can be shown to be contained, or in the case of low released energy, or if the part is failsafe, or if there is only a remote possibility of significant crack growth on the part to begin with.		

632 *fracture mechanics*

	ISO 14623:2003	2.28	TC20/SC14/WG1
792	engineering discipline that describes the behaviour of cracks or crack-like flaws in materials or structures under stress		
	ISO 21347:2005	3.14	TC20/SC14/WG1
793	engineering discipline that describes the behaviour of cracks or crack-like flaws in materials under stress		
	ISO 21648:2008	2.1.18	TC20/SC14/WG1
794	engineering discipline that describes the behaviour of cracks or crack-like flaws in materials under stress		

633 *fracture toughness*

	ISO 14623:2003	2.29	TC20/SC14/WG1
795	generic term for measures of resistance to the extension of a crack		
	ISO 21648:2008	2.1.19	TC20/SC14/WG1
796	generic term for measurements of resistance to extension of a crack		

634 *fracture-critical item*

	ISO 10786:2011	3.25	TC20/SC14/WG1
797	fracture-critical item (preferred term) fracture-critical part (admitted term) structural part whose failure due to the presence of a flaw would result in a catastrophic failure		

635 *fracture-critical part*

	ISO 10786:2011	3.25	TC20/SC14/WG1

798 fracture-critical item (preferred term)
fracture-critical part (admitted term)

structural part whose failure due to the presence of a flaw would result in a catastrophic failure

636 *fracture-limited life item*

	ISO 21347:2005	3.13	TC20/SC14/WG1

799 any hardware item that requires periodic re-inspection or replacement to comply with damage tolerance requirements

637 *fragmentation*

	ISO 11227:2012	3.1.4	TC20/SC14/WG7

800 process by which an orbiting space object dissociates and produces debris, such as break-up, exposure to space environment, and ageing

638 *frequencies identification*

	ISO 17540:2016	2.14 Operating process in chamber (gas generator) 2.14.22	TC20/SC14/WG2

801 identification of pressure oscillation frequencies in the chamber (2.2.1) (gas generator) corresponding to maximum of amplitude spectrum with natural frequencies

639 *frozen flow*

	ISO 17540:2016	2.19 Flow in nozzle 2.19.3	TC20/SC14/WG2

802 flow in the nozzle (2.12.16) characterized by constancy of combustion product chemical composition

640 *fuel compartment*

	ISO 17540:2016	2.52 Stand compartmen ts 2.52.4	TC20/SC14/WG2

803 stand compartment used for fuel storage tanks and other elements of the fuel supply system

641 *fuel feed system*

	ISO 17540:2016	2.49 Stand systems 2.49.1	TC20/SC14/WG2

804 stand system (2.47.5) intended for engine propellant delivery when carrying out tests

642 *fuel gas saturation system*

	ISO 17540:2016	2.49 Stand systems 2.49.3	TC20/SC14/WG2

805 stand system (2.47.5) intended for the propellant component gas saturation

643 *full scale article*

	ISO 10786:2011	3.26	TC20/SC14/WG1

806 full-size test article which represents the whole flight structure or a part of the flight structure with representative loading and boundary conditions

644 *full thruster impulse*

	ISO 17540:2016	2.9 Low-thrust engine performance 2.9.1	TC20/SC14/WG2

807 thruster impulse of LTE (2.1.3) at which the mean integrated value of thrust, or chamber pressure, is more or equal to 0,9 of the steady-state value of the thrust, or chamber pressure, for the firing

645 *function*

	ISO 10795:2019	3.110	TC20/SC14/WG5

808 intended effect of a system (3.234), subsystem (3.231), product (3.173) or part (3.48)
Note 1 to entry: Functions should have a single definite purpose. Function names should have a declarative structure (e.g. “Validate Telecommands”), and say “what” is to be done rather than “how”. Good naming allows design (3.82, 3.83) components (3.48) with strong cohesion to be easily derived.
[SOURCE: ISO 21351:2005, 3.1.5, modified – NOTE 1 has been removed; NOTE 2 has been changed to Note 1 to entry.]

	ISO 16091:2018	3.1.8	TC20/SC14/WG5

809 intended effect of a system, subsystem, product or part

	ISO 21351:2005	3.1.5	TC20/SC14/WG5

810 intended effect of a system, subsystem, product or part
NOTE 1 Adapted from EN 1325-1.
NOTE 2 Functions should have a single definite purpose. Function names should have a declarative structure (e.g. “Validate Telecommands”), and say “what” is to be done rather than “how”. Good naming allows design components with strong cohesion to be easily derived.

646 *function tree*

	ISO 10795:2019	3.111	TC20/SC14/WG5

811 hierarchical decomposition of the system (3.234) performances (3.166) into functions (3.110) and subfunctions that, when all are fulfilled, completes the overall system mission (3.154)

647 *functional analysis*

	ISO 10795:2019	3.112	TC20/SC14/WG5

812 technique of identifying and describing all functions (3.110) of a system (3.234)
[SOURCE: ISO 21351:2005, 3.1.6, modified – NOTE 1 has been removed.]

	ISO 21351:2005	3.1.6	TC20/SC14/WG5

813 technique of identifying and describing all functions of a system
NOTE Adapted from EN 1325-1.

648 *functional characteristic*

	ISO 21886:2019	3.1.1	TC20/SC14/WG5

814 performance parameter and design constraint to be realized or required, including operational and logistic parameters and their respective tolerances
Note 1 to entry: Functional characteristics include all performance parameters such as range, speed, lethality, reliability, maintainability and safety.

649 *functional performance requirements*

	ISO 16290:2013	2.6	TC20/SC14/WG5

815 subset of the performance requirements (2.14) of an element (2.4) specifying the element functions (2.5)
Note 1 to entry: The functional performance requirements do not necessarily include requirements resulting from the operational environment (2.11)

650 *functional specification*

	ISO 10795:2019	3.113	TC20/SC14/WG5

816 document (3.88) by which the customer (3.78) establishes the intended purpose of a product (3.173), its associated constraints (3.61) and environment (3.92), the operational and performances (3.166) features, and the permissible flexibility
Note 1 to entry: This document contains a complete set of provisional technical requirements (3.201) for a product.
Note 2 to entry: This term is equivalent to "functional performance specification" as defined in EN 1325-1.
[SOURCE: ISO 21351:2005, 3.1.7]

	ISO 21351:2005	3.1.7	TC20/SC14/WG5

817 document by which the customer establishes the intended purpose of a product, its associated constraints and environment, the operational and performances features, and the permissible flexibility
NOTE 1 This document contains a complete set of provisional technical requirements for a product.
NOTE 2 This term is equivalent to "functional performance specification" as defined in EN 1325-1.

651 *functional track*

	ISO 16159:2012	2.8	TC20/SC14/WG3

818 sequence of components on which energy (mechanical, electric, or pressure) is transferred from the primary failed component to the discrepant component

652 *functional verification*

	ISO 10795:2019	3.114	TC20/SC14/WG5

819 task of assuring that hardware (3.119) or software (3.217) functions (3.110) as per the design (3.82, 3.83) requirements (3.201)

653 *galactic cosmic rays*

GCR	**ISO 15390:2004**	2.1	TC20/SC14/WG4

820 high-energy charged particle fluxes penetrating the heliosphere from local interstellar space

GCR	**ISO 15856:2010**	3.1.7	TC20/SC14/WG4

821 high-energy-charged particle fluxes penetrating the heliosphere from local interstellar space [ISO 15390, definition 2.1]

GCR	**ISO 21980:2020**	3.1	TC20/SC14/WG4

822 high-energy-charged particle fluxes (3.2) penetrating the heliosphere from local interstellar space
Note 1 to entry: Galactic cosmic rays are composed primarily of high-energy protons and atomic nuclei. Upon impact with the Earth's atmosphere, cosmic rays can produce showers of secondary particles that sometimes reach the Earth’s surface. There is evidence that a significant fraction of primary cosmic rays originate from stellar supernova explosions and perhaps from active galactic nuclei.
[SOURCE: ISO 15390:2004, 2.1, modified — Note 1 to entry has been added.]

654 *gap distance*

	ISO 11221:2011	2.11	TC20/SC14/WG4

823 distance between biased cells or conductors

655 *gas deflector*

	ISO 17540:2016	2.51 Stand system elements 2.51.19	TC20/SC14/WG2

824 flame deflector
part of a hot firing test stand to deflect the exhaust gas stream to a safer direction

656 *gas distribution compartment*

	ISO 17540:2016	2.52 Stand compartmen ts 2.52.3	TC20/SC14/WG2

825 stand compartment used for gas distribution devices/panels

657 *gas dynamic tube*

	ISO 17540:2016	2.51 Stand system elements 2.51.11	TC20/SC14/WG2

826 stand element intended for creating negative pressure at the nozzle (2.12.16)

658 *gas expansion ratio in nozzle*

	ISO 17540:2016	2.17 Nozzle characteristi cs 2.17.2	TC20/SC14/WG2

827 ratio of the combustion product total pressure in the initial section to the static pressure at the exit section

659 *Gas Generator*

	ISO 17540:2016	2.2 Engine units 2.2.4	TC20/SC14/WG2

828 unit of engine wherein propellant, as a result of chemical reaction, is converted in gaseous products of reaction at relatively low temperature

	ISO 26871:2012	3.1.21	TC20/SC14/WG1

829 explosive device that produces a volume of gas or exothermic output or both
EXAMPLE Pyrotechnic igniters for solid propulsion applications, gas generator for inflatable structures.

660 *gas protecting device*

	ISO 17540:2016	2.51 Stand system elements 2.51.12	TC20/SC14/WG2

830 stand facility intended for neutralizing toxic propellant components ejected from the engine during launch and stop regime and also at its post-launch treatment on the stand

661 *gas supply system*

	ISO 17540:2016	2.49 Stand systems 2.49.2	TC20/SC14/WG2

831 compressed gas feed system
stand system (2.47.5) intended for the engine and stand facilities compressed gas supply

662 *gas vent tube*

	ISO 17540:2016	2.51 Stand system elements 2.51.18	TC20/SC14/WG2

832 stand device used for closed gas jet outlet of combustion products in a required direction

663 *gas-distributing grid*

	ISO 17540:2016	2.12 Chamber (gas generator) components 2.12.10	TC20/SC14/WG2

833 item of the chamber (2.2.1) or gas generator mixing system that provides gas distribution in areas of the mixing system (2.12.3) and increases the operating process stability in the chamber or gas generator(2.2.4)

664 *gassing*

	ISO 17546:2016	3.14	TC20/SC14/WG1

834 evolution of gas from one or more of the electrodes in a cell [3]

[3] JSC20793 rev.B, "CREWED SPACE VEHICLE BATTERY SAFETY REQUIREMENTS"

665 *gauges*

	ISO 16454:2007	3.15	TC20/SC14/WG1

835 thickness and other structure dimensions which relative scattering could result in significant effect on stress levels and/or margin of safety

666 generally clean

GC	**ISO 14952-1:2003**	2.12	TC20/SC14/WG6

836 free from manufacturing residue, dirt, oil, grease, processing debris, or other extraneous contamination based on visual examination
NOTE This level does not apply to hardware that is sensitive to contamination

GC	**ISO 15388:2012**	3.1.25	TC20/SC14/WG6

837 free from manufacturing residue, dirt, oil, grease, processing debris, or other extraneous contamination based on visual examination
NOTE This level does not apply to hardware that is sensitive to contamination.
[ISO 14952-1:2003, 2.12]

667 geomagnetic coordinates L and B

	ISO 17761:2015	2.4	TC20/SC14/WG4

838 used to map differential fluxes J of energetic geomagnetically trapped particles
Note 1 to entry: B is absolute value of geomagnetic field in the point of observation. In the dipole approximation of the geomagnetic field, L-shell is distance to magnetic field line in equtorial plane.
Note 2 to entry: Geomagnetic coordinates L-shell and B are introduced by Macilwain. [11]
[11] McIlwain C.E. Magnetic Coordinates. Space Sci. Rev. 1966, 5 (5) pp. 585–598

668 geomagnetic dipole tilt angle

	ISO 22009:2009	2.4	TC20/SC14/WG4

839 angle of inclination of the geomagnetic dipole to the plane orthogonal to the earth-sun line

669 Geomagnetic Field

	ISO 17520:2016	2.5	TC20/SC14/WG4

840 sum of internal and external magnetic fields

670 geometric expansion ratio of nozzle

	ISO 17540:2016	2.17 Nozzle characteristics 2.17.1	TC20/SC14/WG2

841 ratio of the nozzle exit section area to the minimum section area

671 geopotential altitude

	ISO/TR 11225:2012	3.3	TC20/SC14/WG4

842 point in atmosphere expressed in terms of its potential energy per unit mass (geopotential) at this altitude relative to sea level

672 geostationary Earth orbit

	ISO 14200:2012	3.2	TC20/SC14/WG4

843 Earth orbit having zero inclination and zero eccentricity; whose orbital period is equal to the Earth’s sidereal rotation period
[SOURCE: ISO 24113:2011, definition 3.8]

GEO	**ISO 24113:2019**	3.11	TC20/SC14/WG7

844 Earth orbit (3.8) having zero inclination, zero eccentricity, and an orbital period equal to the Earth's sidereal rotation period

673 *geostationary orbit*

	ISO 17851:2016	3.2 Terms related to orbits 3.2.5	TC20/SC14/WG4

845 circular orbit with the altitude of ~36 000 km in the Earth's equatorial plane. Geostationary orbit is a special case of a geosynchronous orbit

674 *geosynchronous Earth orbit*

	ISO 14200:2012	3.3	TC20/SC14/WG4

846 Earth orbit with an orbital period equal to the Earth's sidereal rotation period

675 *geosynchronous orbit*

	ISO 17851:2016	3.2 Terms related to orbits 3.2.4	TC20/SC14/WG4

847 orbit around the Earth with an orbital period of one sidereal day, matching the Earth's sidereal rotation period

676 *glow discharge*

	ISO 11221:2011	2.12	TC20/SC14/WG4

848 gaseous discharge with a surface glow near the cathode surface
NOTE The origin of the ionized gas is mostly ambient neutral gas molecules rather than metal vapour from the cathode surface.

677 *good laboratory practice*

GLP	**ISO 14624-2:2003**	4.4	TC20/SC14/WG6

849 practice which involves the testing of standard reference materials to verify data accuracy and repeatability

GLP	**ISO 14624-3:2005**	3.6	TC20/SC14/WG6

850 practice that involves the testing of standard materials to verify data accuracy and repeatability

GLP	**ISO 14624-4:2003**	3.3	TC20/SC14/WG6

851 practice which involves the testing of standard reference materials to verify data accuracy and repeatability

678 *graveyard orbit*

	ISO 16164:2015	3.5	TC20/SC14/WG3

852 disposal orbit which locates a spacecraft outside of the protected region

679 *graveyard orbit region*

	ISO 16699:2015	3.5	TC20/SC14/WG3

853 orbit region outside of protected regions such as LEO and GEO

680 *gravitational focusing*

	ISO 14200:2012	3.4	TC20/SC14/WG4

854 force of the Earth's gravitational field that attracts meteoroids, changes their trajectories, and therefore increases the flux

681 *ground control*

	ISO 15389:2001	3.5	TC20/SC14/WG3

855 equipment, fluids, or signals, provided for command or control purposes, which are neither on board nor originate on board the launch vehicle

682 *ground operations*

	ISO 10795:2019	3.115	TC20/SC14/WG5

856 all activities related to the planning, execution and evaluation (3.97) of the control of the ground segment (3.116) (or subsets thereof) facility

683 *ground safety*

	ISO 14620-2:2019	3.6	TC20/SC14/WG5

857 arrangements intended to reduce and control safety risks (3.19) identified in ground prelaunch and launch (3.8) activities of a manned or unmanned space vehicle
Note 1 to entry: Arrangements include protecting people, public and private property, and the environment, and completing and adjusting the national regulatory laws (3.14) related to occupational safety and health, workers, environment, space, etc.

	ISO 17689:2015	2.9	TC20/SC14/WG2

858 arrangements intended to reduce and control safety risks identified in ground prelaunch and launch activities of a manned or unmanned space vehicle
Note 1 to entry: Arrangements include protecting people, public and private property, and the environment and completing and adjusting the national regulatory laws related to occupational safety and health, workers, environment, space, etc.
[SOURCE: ISO 14620-2:2011, 3.8]

684 *ground segment*

G/S	**ISO 10795:2019**	3.116	TC20/SC14/WG5

859 part of a space system (3.223), located on ground, which monitors and controls space segment element(s) (3.222)
Note 1 to entry: A ground segment is composed of one or more ground segment elements.
[SOURCE: EN 16601-00-01:2015, 2.3.95]

	ISO 14950:2004	3.2.6	TC20/SC14/WG3

860 all ground facilities and personnel involved in the preparation and/or execution of mission operations

685 *Ground Support Equipment*

GSE	**ISO 10795:2019**	3.117	TC20/SC14/WG5

861 non-flight systems (3.234), equipment (3.93) or devices necessary to support the operations of transporting, receiving, handling, assembly (3.23), inspection (3.127), test (3.239), checkout, servicing, launch and recovery of a space system (3.223) at launch, landing or retrieval sites
[SOURCE: ISO 14625:2007, 3.1.5]

	ISO 14624-6:2006	3.5	TC20/SC14/WG6

862 equipment used in the processing and preparation of flight hardware

GSE	**ISO 14625:2007**	3.1.5	TC20/SC14/WG3

863 non-flight systems, equipment or devices necessary to support the operations of transporting, receiving, handling, assembly, inspection, test, checkout, servicing, launch and recovery of a space system at launch, landing or retrieval sites

GSE	**ISO 15388:2012**	3.1.26	TC20/SC14/WG6

864 non-flight systems, equipment or devices necessary to support the operations of transporting, receiving, handling, assembly, inspection, test, checkout, servicing, launch and recovery of a space system at launch, landing or retrieval sites
[ISO 14625:2007, 3.1.5]

	ISO 17689:2015	2.2	TC20/SC14/WG2

865 units and systems necessary for the prelaunch operations and operations for launch of payload and launch vehicle (rocket fuelling systems, gas supply systems, thermostating systems, launch pad, units for LV installation on launch pad, ground support equipment control systems, etc.)

GSE	**ISO 27025:2010**	3.1.2	TC20/SC14/WG5

866 optical, mechanical, fluidic, electrical and software support equipment or systems used, for example, for calibration, measurements, testing, simulation, transportation and handling of space segments or of space segment elements

686 *ground systems*

	ISO 10795:2019	3.118	TC20/SC14/WG5

867 all ground infrastructure (3.126) elements that are used to support the preparation activities leading up to mission (3.154) operations, the conduct of mission operations and all post-operational activities

687 *ground test*

	ISO 17540:2016	2.30 Types of engine tests: Test site 2.30.1	TC20/SC14/WG2

868 engine firing test in an earthly environment

688 *ground test programme*

	ISO 24917:2010	3.18	TC20/SC14/WG2

869 organizational-methodological document obligatory for execution, which specifies the test object and objectives, types, sequence and scope of conducted experiments, order, conditions, place, time and support of test, test reporting, as well as responsibility for test support and conduct

689 *ground transportation*

	ISO 15862:2009	2.2	TC20/SC14/WG2

870 spacecraft transportation at launch site

690 *guarantee life*

	ISO 24917:2010	3.34	TC20/SC14/WG2

871 service (guarantee) life
period starting at the completion of fabrication and continuing through all acceptance testing, maintenance, handling, storage, transportation, pre-launch testing, all phases of launch, orbital operations, disposal, re-entry or recovery from orbit

691 *guarantee reserve of capacity for work parameter*

	ISO 17540:2016	2.43 Analysis of engine technical status 2.43.5	TC20/SC14/WG2

872 reserve of capacity for work parameter (2.43.3) at guarantee conditions

692 *guarantee test conditions*

	ISO 17540:2016	2.37 Test conditions 2.37.3	TC20/SC14/WG2

873 expanded engine test condition (as compared to the operating test conditions (2.37.2))
Note 1 to entry: When a fault is identified during the test, there are actions to be taken to determine its causes, removal of the fault or confirming the impossibility of it appearing in operating conditions.

693 *habitable spacecraft*

MSC	**ISO 16157:2018**	3.4	TC20/SC14/WG6

874 manned (habitable) spacecraft
spacecraft, spaceship, space station, Lunar or planetary base with pressurized components inside

MSC	**ISO 16726:2018**	3.4	TC20/SC14/WG6

875 manned (habitable) spacecraft

spacecraft, spaceship, space station, Lunar or planetary base with pressurized components inside which human habitation environment is maintained
[SOURCE: ISO 16157, 3.4]

694 *handling mechanism*

	ISO 15389:2001	3.6	TC20/SC14/WG3

876 device used to provide positioning, manipulation, and physical dead-weight support of an object

695 *hard excitation of self-oscillation*

	ISO 17540:2016	2.14 Operating process in chamber (gas generator) 2.14.19	TC20/SC14/WG2

877 appearance of pressure self-oscillation in the combustion chamber (2.12.1) from disturbances that exceed critical value

696 *hard magnetic material*

	ISO 21494:2019	3.18	TC20/SC14/WG2

878 ferromagnetic material with high field strength (coercivity) that cannot be demagnetized easily
EXAMPLE Permanent magnets.

697 *hard upset*

	ISO 24637:2009	3.1.2	TC20/SC14/WG1

879 degradation of product performance that requires manual (non-automatic) issuance of a reset command or intervening procedure to restore product nominal performance without removal from the system

698 *Hardware*

H/W	**ISO 10795:2019**	3.119	TC20/SC14/WG5

880 items (3.134) of identifiable equipment (3.93) including piece parts, components (3.48), assemblies, subsystems (3.231) and systems (3.234)

699 *hardware in the loop simulation*

	ISO 16781:2013	2.5	TC20/SC14/WG1

881 kind of simulation, in which some simulation models of control system are implemented by real equipments

700 *Harm*

	ISO 17546:2016	3.15	TC20/SC14/WG1

882 physical injury or damage to the health of people or damage to property or the environment

701 *Harmful chemical contaminants*

	ISO 16726:2018	3.7	TC20/SC14/WG6

883 gaseous contaminants in habitable on environment of a manned spacecraft or module, causing toxic effect humans

702 *hazard*

ISO 10795:2019 3.120 TC20/SC14/WG5

884 existing or potential condition of an item (3.134) that can result in an accident (3.8)
Note 1 to entry: This condition can be associated with the design (3.82, 3.83), fabrication, operation or environment (3.92) of the item, and has the potential for accidents.
Note 2 to entry: “Items” can include human beings.
[SOURCE: ISO 14620-2:2011, 3.9, modified – “mishap” has been changed to “accident”, Note 2 to entry has been added.]

ISO 14620-1:2018 3.1.12 TC20/SC14/WG5

885 existing or potential condition of an item that can result in an accident
Note 1 to entry: This condition can be associated with the design, fabrication, operation or environment of the item, and has the potential for mishaps.
Note 2 to entry: “Items” can include human beings.
[SOURCE: ISO 14620 2:2011, 3.9, modified — “mishap” changed to “accident”, Note 2 to entry added]

ISO 14623:2003 2.30 TC20/SC14/WG1

886 existing or potential condition that can result in an accident

ISO 17546:2016 3.16 TC20/SC14/WG1

887 potential source of harm
Note 1 to entry: The term hazard is qualified in order to define its origin or the nature of the expected harm (for example, electric shock hazard, crushing hazard, cutting hazard, toxic hazard, fire hazard, drowning hazard).

ISO 17689:2015 2.10 TC20/SC14/WG2

888 existing or potential condition of an item that can result in a mishap
Note 1 to entry: This condition can be associated with the design, fabrication, operation, or environment of the item, and has the potential for mishaps.
[SOURCE: ISO 14620-2:2011, 3.9]

ISO 22538-4:2007 3.2 TC20/SC14/WG6

889 source of danger, which could harm property or personnel

ISO 24638:2008 3.12 TC20/SC14/WG1

890 existing or potential condition that can result in an accident

703 *hazard analysis*

ISO 10795:2019 3.121 TC20/SC14/WG5

891 determination of potential sources of danger, causes (3.35), effects, hazard (3.120) level, and recommended resolution for those conditions found in either the hardware (3.119)/software (3.217) system (3.234), the person-machine relationship, or both, that can cause loss of personnel capability, loss of system, or loss of life/injury to the public

HA **ISO 26870:2009** 3.5 TC20/SC14/WG3

892 document that identifies the hazards associated with the operation of a system or component, the likelihood and consequences of their occurrence, and the procedures for preventing their occurrence and mitigating their consequences

704 *hazardous event*

	ISO 10795:2019	3.122	TC20/SC14/WG5

893 occurrence leading to undesired consequences and arising from the triggering by one (or more) initiator events of one (or more) hazards (3.120)
[SOURCE: ISO 14620-1:2018, 3.1.13]

	ISO 14620-1:2018	3.1.13	TC20/SC14/WG5

894 occurrence leading to undesired consequences and arising from the triggering by one (or more) initiator events of one (or more) hazards
[SOURCE: Adapted from EN 13701:2001]

705 *head*

	ISO 17540:2016	2.21 Pump characteristics 2.21.1	TC20/SC14/WG2

895 mechanical energy per unit mass flow

706 *heavy ion*

	ISO 21980:2020	3.14	TC20/SC14/WG4

896 ion particles with a large atomic number
Note 1 to entry: Heavy ion generally refers to particles of He or more.

707 *heliosphere*

	ISO 15856:2010	3.1.8	TC20/SC14/WG4

897 region surrounding the sun where the solar wind dominates the interstellar medium
NOTE Also known as solar cavity.

708 *hermetic seal*

	ISO 17546:2016	3.17	TC20/SC14/WG1

898 permanent air-tight seal [7]

[7] MIL-STD-810. DEPARTMENT OF DEFENSE TEST METHOD STANDARD ENVIRONMENTAL ENGINEERING CONSIDERATIONS AND LABORATORY TESTS”.

709 *heterosphere*

	ISO 14222:2013	2.2	TC20/SC14/WG4

899 portion of the atmosphere, above ~125 km, where diffusive separation of species dominates and atmospheric composition depends on height

710 *Heywood circularity factor*

	ISO 10788:2014	2.1.6	TC20/SC14/WG4

900 expression of the complexity of a particle's perimeter
Note 1 to entry: Formally, the Heywood circularity factor is equal to 1 divided by particle perimeter divided by the circumference of a circle with the same area as the particle. This is numerically equal to the "circularity" defined by Waddell (1933], It is expressed in this manner to make it apparent that the Heywood factor is the inverse of a common definition of "circularity", another common measure.
Note 2 to entry; Values range from > 0 to 1 and equal 1 for a circle.

711 *high area-to-mass*

HAMR	**ISO 27852:2016**	3.1.3	TC20/SC14/WG3

901 space objects are considered to be high area-to-mass (or HAMR) objects if the ratio of area to mass exceeds 0.1 m^2/kg

712 *high elliptical orbits*

	ISO 17851:2016	3.2 Terms related to orbits 3.2.6	TC20/SC14/WG4

902 perigee of approximately 1 000 km and apogee of approximately 36 000 km

713 *high level telemetry*

	ISO 14950:2004	3.2.7	TC20/SC14/WG3

903 telemetry processed from the low level telemetry by an on-board application process

714 *high-altitude test conditions*

	ISO 17540:2016	2.37 Test conditions 2.37.6	TC20/SC14/WG2

904 engine test conditions providing complete gas expansion in the nozzle (2.12.16)

715 *high-efficiency particulate air filter*

HEPA	**ISO 14952-1:2003**	2.13	TC20/SC14/WG6

905 filter that is at least 99,97 % efficient by volume on 0,3 μm particles

716 *high-frequency oscillation*

	ISO 17540:2016	2.14 Operating process in chamber (gas generator) 2.14.11	TC20/SC14/WG2

906 pressure oscillation in the combustion chamber (2.12.1) with frequencies that are equal to or exceeding the minimum natural acoustic frequency

717 *high-frequency self-oscillation*

	ISO 17540:2016	2.14 Operating process in chamber (gas generator) 2.14.12	TC20/SC14/WG2

907 pressure self-oscillation in the combustion chamber (2.12.1) with a frequency that is similar to one of the natural acoustic frequencies

718 *homogeneous volume of magnetic field*

	ISO 21494:2019	3.16	TC20/SC14/WG2

908 spatial volume that satisfies the requirement of magnetic field homogeneity

719 *homosphere*

	ISO 14222:2013	2.1	TC20/SC14/WG4

909 region of the atmosphere that is well mixed, i.e. the major species concentrations are independent of height and location
Note 1 to entry: This region extends from 0 to ~100 km, and includes the temperature-defined regions of the troposphere (surface up to ~ 8 - 15 km altitude), the stratosphere (~10 - 12 km up to 50 km altitude), the mesosphere (~50 km up to about 90 km altitude), and the lowest part of the thermosphere.

720 *hoop stress*

	ISO 10785:2011	3.17	TC20/SC14/WG1

910 circumferential stress at the convolution section induced by pressure

721 *horizontal test stand*

	ISO 17540:2016	2.48 Stand types 2.48.2	TC20/SC14/WG2

911 engine test stand (2.47.1) with the engine or its unit mounted so that its gas dynamic axis has a horizontal or close to horizontal direction

722 *Horizontal Wind Model*

HWM07	**ISO 14222:2013**	2.7	TC20/SC14/WG4

912 Comprehensive empirical global model of horizontal winds in the mesosphere an d thermosphere (middle and upper atmosphere).
Note 1 t o entry: Reference values for the ap index needed as input for the win d model are give n in Annex A.
Note 2 to entry: HWM07 does not include a dependence o n solar EUV irradiance. Solar cycle effects on thermospheric winds are generally small during the daytime, but can exceed 20 m/s at night.
Note 3 to entry: HWM07 thermospheric winds at high geomagnetic latitudes during geomagnetically quiet periods should be treated cautiously.
Note 4 to entry: See Reference [3] in standard

723 *Human habitation environment in spacecraft*

	ISO 16157:2018	3.1	TC20/SC14/WG6

913 involves material, energy and information flows, as well as elements formed in SC habitable compartments
Note 1 to entry: Such elements are derived from life activity processes, human social-labour processes, space factors, space mobility, and hardware functioning processes, including the ones designed to arrange humans’ interaction with the habitation environment in order to provide specified conditions for human life activity in space flights.
[SOURCE: ISO 17763, 3.1]

	ISO 16726:2018	3.1	TC20/SC14/WG6

914 complex issue that involves material, energy and information flows, as well as elements formed in SC habitable compartments
Note 1 to entry: Such elements are derived from life activity processes, human social-labour processes, space factors, space mobility, and hardware functioning processes, including the ones designed to arrange humans’ interaction with the habitation environment in order to provide specified conditions for human life activity in space flights.
[SOURCE: ISO 17763, 3.1]

	ISO 17763:2018	3.1	TC20/SC14/WG6

915 complex issue that involves material, energy and information flow, as well as elements formed in SC habitable compartments
Note 1 to entry: Such elements are derived from life activity processes, human social-labour processes, space factors, space mobility, human comfort and safety, and hardware functioning processes, including the ones that are designed to arrange human beings' interaction with the habitation environment in order to provide specified conditions for human life activity in space flights.

724 *Human living conditions in SC*

	ISO 16726:2018	3.2	TC20/SC14/WG6

916 complex of human habitation environment parameters in SC, providing health maintenance, human safety and keeping of his ability to work at a level needed to execute the planned work program
[SOURCE: ISO 17763, 3.2]

725 *human living conditions in spacecraft*

	ISO 16157:2018	3.2	TC20/SC14/WG6

917 complex human habitation environment parameters in SC, providing health maintenance, human safety and keeping of human's ability to work at a level needed to execute the planned work program
[SOURCE: ISO 17763, 3.2]

	ISO 17763:2018	3.2	TC20/SC14/WG6

918 complex of human habitation environment parameters in SC, providing health maintenance, human safety and keeping his ability to work at the level needed to execute the planned work programme

726 *human vibration*

	ISO 10786:2011	3.28	TC20/SC14/WG1

919 vibration transmitted to and/or induced by the crew members

727 *hydraulic solenoid*

	ISO 17540:2016	2.23 Automation units 2.23.4	TC20/SC14/WG2

920 electrical hydraulic valve
valve whose sluice is activated by the electromagnet and hydraulic drive parts of the valve

728 *hydrocarbon*

	ISO 14952-1:2003	2.14	TC20/SC14/WG6

921 organic compound consisting exclusively of the elements of carbon and hydrogen

729 *hydrogen embrittlement*

	ISO 10786:2011	3.27	TC20/SC14/WG1

922 mechanical-environmental process that results from the initial presence or absorption of excessive amounts of hydrogen in metals, usually in combination with residual or applied tensile stresses
[ISO 14623:2003]

	ISO 14623:2003	2.31	TC20/SC14/WG1

923 mechanical-environmental process that results from the initial presence or absorption of excessive amounts of hydrogen in metals, usually in combination with residual or applied tensile stresses

	ISO 24638:2008	3.13	TC20/SC14/WG1

924 mechanical-environmental failure process that results from the initial presence or absorption of excessive amounts of hydrogen in metals, usually in combination with residual or applied tensile stresses

730 *hydrostatic pressure*

	ISO 14622:2000	2.6.5	TC20/SC14/WG1

925 pressure at a level below the liquid level in the tank, which is induced by the height of liquid above this level, plus quasi-static accelerations

731 *hypergolic plopellants*

	ISO 14952-1:2003	2.15	TC20/SC14/WG6

926 any fuel/catalyst (monopropellant) or fuel/oxidizer (bipropellant) combination that ignites spontaneously and is used in propelling a rocket

732 *hypervelocity impact*

	ISO 11227:2012	3.1.5	TC20/SC14/WG7

927 impact occurring with a velocity greater than the velocity of sound in any given material

733 *i1-i2 scanning*

	ISO 10830:2011	3.5	TC20/SC14/WG6

928 incident-angle scanning method that is executed on the top or bottom surface of the test block
NOTE It consists of changing the angle of incidence (inclining angle) i1 and changing the swivel angle i2 (see Figure 1). R-X scanning is conducted at each setting angle (data collection point).

734 *i1-off scanning*

	ISO 10830:2011	3.6	TC20/SC14/WG6

929 incident-angle scanning method that is executed on the side surface of the test block
NOTE It consists of changing the longitudinal incident angle i1 and changing the offset distance off (corresponding to the horizontal incident angle, see Figure 2 in standard). R-Z scanning is conducted at each setting angle (data collection point).

735 *ideal parameter value*

	ISO 17540:2016	2.7 General parameters and performance of engine 2.7.28, 2.7.29	TC20/SC14/WG2

930 <of chamber> parameter value of chamber (2.2.1), corresponding to the equilibrium flow of combustion products in the absence outlet heat and friction
<of gas generator> parameter value of gas generator (2.2.4), corresponding to the equilibrium flow of products gas generation in the absence outlet heat and friction

736 *IG12*

	ISO 16457:2014	2.12	TC20/SC14/WG4

931 12-month running mean of monthly ionosphere-effective sunspot number

737 *ignition temperature*

	ISO 22538-4:2007	3.4	TC20/SC14/WG6

932 temperature at which a material will ignite under specific test conditions

738 *immersion test*

	ISO 14624-5:2006	3.2	TC20/SC14/WG6

933 test in which the fluid covers the entire sample for the duration of the test

	ISO 14624-6:2006	3.6	TC20/SC14/WG6

934 test in which the fluid covers the entire sample for the duration of the test

739 *immunity*

	ISO 14302:2002	3.1.8	TC20/SC14/WG1

935 ability of a device, equipment, or system to perform without degradation in the presence of an electromagnetic disturbance

740 *impact crater*

	ISO 11227:2012	3.1.6	TC20/SC14/WG7

936 damage left on a material, generally hemispherical in shape, after a projectile has hit its surface without going throughout the material

741 *impact damage*

	ISO 14623:2003	2.32	TC20/SC14/WG1

937 induced fault in the composite overwrap or the metallic liner of a composite overwrapped pressure vessel that is caused by an object strike on the vessel or vessel strike on an object

	ISO 21648:2008	2.1.20	TC20/SC14/WG1

938 damage in a non-metallic part within the flywheel module that is caused by an object striking the part or by the part striking an object

742 *impact damage indicator*

ISO 21347:2005 3.15 TC20/SC14/WG1

939 means for indicating the occurrence of an impact event

743 *impact damage protector*

ISO 14623:2003 2.33 TC20/SC14/WG1

940 physical device that can be used to prevent impact damage

ISO 21347:2005 3.16 TC20/SC14/WG1

941 physical device which can be used to prevent impact damage

744 *impact damage tolerance*

ISO 21648:2008 2.1.21 TC20/SC14/WG1

942 ability of the fracture critical non-metallic parts in the flywheel module to resist strength degradation due to the impact damage event

745 *impact flux*

ISO 14200:2012 3.5 TC20/SC14/WG4

943 number of impacts per unit area and per unit period

746 *impact risk*

ISO 14200:2012 3.6 TC20/SC14/WG4

944 risk of impact against meteoroids and debris on spacecraft

747 *impact survivability*

ISO 16126:2014 3.7 TC20/SC14/WG7

945 ability of a spacecraft to function after being exposed to the space debris or meteoroid environment
Note 1 to entry: A measure of impact survivability is the Probability of No Failure (PNF).

748 *impact-ignition resistance*

ISO 22538-4:2007 3.3 TC20/SC14/WG6

946 resistance of a material to ignition when struck by an object in an oxygen atmosphere under specific test conditions

749 *implementation document*

ISO 10795:2019 3.123 TC20/SC14/WG5

947 formal response from the supplier (3.232) to the customer's (3.78) project (3.178) requirements (3.201) document (3.88) describing how all requirements will be met
[SOURCE: EN 16601-00-01:2015, 2.3.106]

ISO 16091:2018 3.1.9 TC20/SC14/WG5

948 formal response from a supplier to the customer’s Project Requirements Document describing how all requirements will be met
[SOURCE: EN 16601-00-01:2015]

750 *impulse*

ISO 17540:2016	2.9 Low-thrust engine performance 2.9.5	TC20/SC14/WG2

949 forceful impact of LTE (2.1.3) characterized by changes in traction or pressure (2.7.7) in the chamber (2.9.5) at the time of a switch

751 *incident*

ISO 10795:2019	3.124	TC20/SC14/WG5

950 unexpected event that might be, or could lead to, an operational interruption, disruption, loss, emergency, crisis or accident (3.8)
[SOURCE: EN 16601-00-01:2015, 2.3.107, modified – NOTE has been removed.]

752 *incident-angle scanning*

ISO 10830:2011	3.4	TC20/SC14/WG6

951 scanning method in which the two independent incident angles of a probe are changed sequentially
NOTE Either i1-i2 scanning or i1-off scanning is conducted following either an orthogonal scanning or staggered scanning method.

753 *inclination excursion region*

ISO 26872:2019	3.1	TC20/SC14/WG3

952 region in space occupied either by a non-perational geostationary spacecraft (3.4) or by an operational geosynchronous spacecraft without inclination station-keeping

754 *inclusion*

ISO 17540:2016	2.9 Low-thrust engine performance 2.9.8	TC20/SC14/WG2

953 on-time
time interval from the moment of voltage being applied to the thruster electric valve up to the moment of reenergizing the LTE (2.1.3)

755 *inclusion frequency*

ISO 17540:2016	2.9 Low-thrust engine performance 2.9.12	TC20/SC14/WG2

954 reciprocal of cycle period (2.9.11)

756 *inconclusive test result*

	ISO 17540:2016	2.38 Test results 2.38.2	TC20/SC14/WG2

955 test result on the basis of which conclusions cannot be drawn about engine technical condition, suitable for its reliability or quality analysis

Note 1 to entry: The same test result depending on the objectives specified at reliability analysis and quality control may be regarded as conclusive and inconclusive.

757 *independent expert*

	ISO 21349:2007	3.1	TC20/SC14/WG5

956 person highly qualified in some aspect of the technical content of the project review who does not have a personal conflict of interest concerning the outcome of the review

758 *independent test*

	ISO 17540:2016	2.29 Types of engine tests: Associate with rocket 2.29.2	TC20/SC14/WG2

957 off-line test
engine test (2.27.1) outside a propulsion system

759 *index of magnetosphere disturbance*

K	**ISO 17520:2016**	2.14	TC20/SC14/WG4

958 three-hour quasi-logarithmic local index of geomagnetic activity relative to on assumed quiet-day curve for a specific recording site
Note 1 to entry: The range is from zero to nine. The K index measures the deviation of the most disturbed horizontal component.

760 *indicator of pressure in chamber*

	ISO 17540:2016	2.23 Automation units 2.23.5	TC20/SC14/WG2

959 device that is activated when the engine chamber pressure reaches a specified value

761 *indirect method*

	ISO 15859-11:2004	3.1	TC20/SC14/WG6

960 method of measuring fluid purity by indirect means, which consists in measuring the total volume fraction or mass fraction (in %) of aggregate impurities and subtracting this total from 100

	ISO 15859-3:2004	3.2	TC20/SC14/WG6

961 method of measuring fluid purity by indirect means, which consists in measuring the total volume fraction or mass fraction (in %) of aggregate impurities and subtracting this total from 100 %

762 *indirect oxygen service*

	ISO 22538-1:2007	3.1.2	TC20/SC14/WG6

962 service in which materials and components are not normally in direct contact with oxygen but might be as a result of a malfunction, operator error or process disturbance

	ISO 22538-2:2007	3.1.2	TC20/SC14/WG6

963 service in which materials and components are not normally in direct contact with oxygen but might be as a result of a malfunction, operator error or process disturbance

763 *individual risk*

	ISO 17666:2016	3.1.4	TC20/SC14/WG5

964 risk identified, assessed, and mitigated as a distinct risk items in a project

764 *induced factors*

	ISO 17851:2016	3.3 Terms related to space environment factors affecting spacecrafts 3.3.2	TC20/SC14/WG4

965 secondary (induced) factors

space factors appearing as a result of the impact of primary factors on materials but possessing of their own characteristics and physical mechanisms of the impact on materials
- spacecraft own atmosphere
- surface charging
- internal charging
- thermal cycling
- spacecraft operation factors: plasma sources (plasma contactors), electric propulsion engines
and others

765 *induced magnetic field*

	ISO 21494:2019	3.7	TC20/SC14/WG2

966 magnetic field produced by the induced magnetic moment of the EUT and mostly due to soft magnetic materials that easily magnetize in an external magnetic field

766 *induced magnetic moment*

	ISO 21494:2019	3.4	TC20/SC14/WG2

967 additional magnetic moment of the EUT generated in an external magnetic field environment when the EUT is not in a powered on operational mode, that is mostly due to soft magnetic materials that easily magnetize in an external magnetic field

767 *industrial organization*

	ISO 16091:2018	3.1.10	TC20/SC14/WG5

968 identity, interfaces and responsibilities of all participants in the supplier chain for a project

768 *inflight*

	ISO 15389:2001	3.7	TC20/SC14/WG3

969 term that denotes an occurrence or function after vehicle lift-off

769 *information management*

	ISO 10789:2011	3.1	TC20/SC14/WG5

970 information/documentation management
process for ensuring timely and effective creation, collection, review, delivery, storage, and archiving of project information

770 *information measuring system*

	ISO 17540:2016	2.49 Stand systems 2.49.6	TC20/SC14/WG2

971 stand system (2.47.5) intended to obtain, digitize and deliver information about certain mode parameters to the consumer

771 *information system*

	ISO 10789:2011	3.2	TC20/SC14/WG5

972 set of resources, procedures and data required in support of project management processes

	ISO 10795:2019	3.125	TC20/SC14/WG5

973 set of resources, procedures (3.170) and data required in support of project (3.178) management (3.146) processes (3.171)
[SOURCE: ISO 10789:2011, 3.2]

772 *infrared emittance*

	ISO 16378:2013	3.4	TC20/SC14/WG6

974 emittance in the infrared range at least from 5 μm to 25 μrn

773 *infrastructure*

	ISO 10795:2019	3.126	TC20/SC14/WG5

975 <organization> system (3.234) of facilities, equipment (3.93) and services needed for the operation of an organization (3.163)
[SOURCE: ISO 9000: 2015, 3.5.2]

774 *inhibit*

	ISO 14620-1:2018	3.1.14	TC20/SC14/WG5

976 design feature that provides a physical interruption between an energy source and a function actuator
EXAMPLE A relay or transistor between a battery and a pyrotechnic initiator, a latch valve between a propellant tank and thruster.
Note 1 to entry: Two inhibits are independent if no single failure can eliminate more than one inhibit.
[SOURCE: Adapted from EN 13701:2001]

	ISO 14620-2:2019	3.7	TC20/SC14/WG5

977 verifiable design feature intended to prevent a hazardous situation from occurring, that provides an interruption between an energy source and a function actuator
EXAMPLE An inhibit can be a function, a product, a hardware, a software, a physical property, or a technological device.

775 *initial flaw*

	ISO 14623:2003	2.34	TC20/SC14/WG1

978 flaw in a structural material before the application of load and/or deleterious environment

776 *initial flaw size*

	ISO 21347:2005	3.17	TC20/SC14/WG1

979 maximum flaw size, as defined by non-destructive evaluation (NDE), that is assumed to exist for the purpose of performing a damage tolerance (safe-life) analysis or testing

	ISO 21648:2008	2.1.22	TC20/SC14/WG1

980 maximum flaw size, as defined by non-destructive evaluation, that is assumed to exist for the purpose of performing a damage tolerance (safe-life) analysis or testing

777 *initialization*

	ISO 10784-1:2011	3.1.3	TC20/SC14/WG2

981 initial functional and operational checkout of a spacecraft following separation from the launch vehicle

	ISO 10784-2:2011	3.1.3	TC20/SC14/WG2

982 initial functional and operational checkout of a spacecraft following separation from the launch vehicle

	ISO 10784-3:2011	3.1.3	TC20/SC14/WG2

983 Initial functional and operational checkout of a spacecraft following separation from the launch vehicle

778 *Initiator*

	ISO 26871:2012	3.1.22	TC20/SC14/WG1

984 first explosive element in an explosive train which, upon receipt of the proper mechanical, optical or electrical impulse, produces a deflagrating or detonating action
NOTE 1 The initiator is divided into three categories: 1) igniter, a first element whose output is hot gases and hot particles (igniters may be initiators for solid or liquid propellant); 2) squib, a first element whose output is primarily gas and heat (squibs may be initiators for gas generators and igniters or may be cartridges for actuated devices); 3) detonator, a first element whose output is a high-order detonation (detonators are generally used to effect detonation transfers within explosive trains).
NOTE 2 The deflagrating or detonating action is transmitted to the elements following in the train.
NOTE 3 Initiators can be electrically (EEDs), optically or mechanically actuated.

779 *injection in nozzle*

	ISO 17540:2016	2.24 Devices and methods of control efforts creation in engines 2.24.5	TC20/SC14/WG2

985 entering into the nozzle, the expanding part of the additional gas (liquid) flow leading to the emergence of an unbalanced lateral force

780 *injector*

	ISO 17540:2016	2.12 Chamber (gas generator) components 2.12.7	TC20/SC14/WG2

986 device for propellant components or gas generation products that input into the combustion chamber (2.12.1) of chamber (2.2.1) and/or gas generator (2.2.4)

781 *in-service live*

	ISO 17540:2016	2.42 Engine operation 2.42.2	TC20/SC14/WG2

987 operation cycle
operating periodically of a recurrent part from its beginning to the end of engine intended use or to the end of it or its return after intended use for the purpose of maintenance

782 *inspection*

	ISO 10795:2019	3.127	TC20/SC14/WG5

988 determination of conformity (3.60) to specified requirements (3.201)
Note 1 to entry: If the result of an inspection shows conformity, it can be used for purposes of verification (3.244).
Note 2 to entry: The result of an inspection can show conformity or nonconformity (3.157) or a degree of conformity.
[SOURCE: ISO 9000:2015, 3.11.7]

783 *inspection unit*

	ISO 19826:2017	3.3	TC20/SC14/WG5

989 unit on which characteristic inspection is performed

784 *integral energy spectrum*

	ISO 23038:2018	3.5	TC20/SC14/WG1

990 total number of particles in a specified group that possess energies greater than, or equal to, a specified value, given in units of particles per unit area

785 *Integral particle fluence energy spectrum*

FE	*F(≥E)*	**ISO/TR 18147:2014**	2	TC20/SC14/WG4

991 Integral particle fluence energy (E) distribution (at E above a given level) during the space mission (particle/cm2).

786 *Integral proton peak flux energy spectrum*

fE *f(≥E)* **ISO/TR 18147:2014** 2 TC20/SC14/WG4

992 Integral particle peak flux energy (E) distribution during the space mission (or in a set of SEP events) [particle/(cm2·sr·s)].

787 *integrate logistic support*

ILS **ISO 10795:2019** 3.128 TC20/SC14/WG5

993 coordinated and interactive set of technical and management (3.146) tasks whose objectives are the following:
– to express the requirement (3.201) in logistics support and the environmental constraints (3.61) of use in the expression of operational requirement;
– to contribute to obtaining a system (3.234) definition including the support elements:
– allowing the optimization and maintenance (3.145) of its effectiveness for all its life time, in consistency with the user resources;
– allowing total optimization of performance (3.166)/costs/schedules;
– to realize, set up and to renew the support elements, according to the exploitation and the maintenance requirements

788 *integrated product team*

IPT **ISO 14621-1:2019** 3.1.3 TC20/SC14/WG5

994 integrated product team consisting of members selected from the appropriate disciplines
EXAMPLE Engineering, manufacturing, quality, suppliers or customers, as appropriate.

789 *integrated test*

ISO 17540:2016 2.29 Types of engine tests: Associate with rocket 2.29.1 TC20/SC14/WG2

995 on-line test
engine test (2.27.1) in a propulsion system or rocket

790 *integrating sphere*

ISO 16378:2013 3.5 TC20/SC14/WG6

996 an optical device used to either collect flux reflected or transmitted from a sample into a hemisphere or to provide isotropic irradiation of a sample from a complete hemisphere. It consists of a cavity that is approximately spherical in shape with apertures for admitting and detecting flux and usually having additional apertures over which sample and reference specimens are placed

791 *integration*

ISO 10795:2019 3.129 TC20/SC14/WG5

997 process (3.171) of physically and functionally combining lower-level products (3.173) (hardware (3.119) or software (3.217)) to obtain a particular functional configuration (3.50)

792 *integration site*

	ISO 16159:2012	2.9	TC20/SC14/WG3

998 equipment and facility designed for launch vehicle storage, assembly, testing, preparation, maintenance, servicing and preparation for transportation to the launch pad
[ISO/TR 17400:2003, definition 3.1]

	ISO 24917:2010	3.8	TC20/SC14/WG2

999 equipment and facility designed for launch vehicle storage, assembly, testing, preparation, maintenance, servicing and preparation for transportation to the launch pad
[ISO/TR 17400:2003, definition 3.1]

	ISO 26870:2009	3.6	TC20/SC14/WG3

1000 equipment and facility designed for launch vehicle storage, assembly, testing, preparation, maintenance, servicing and preparation for transportation to the launch pad
[ISO/TR 17400:2003, definition 3.1]

	ISO/TR 17400:2003	3.1	TC20/SC14/WG3

1001 equipment and facility designed for launch vehicle storage, assembly, testing, preparation, maintenance, servicing and preparation for transportation to the launch pad

793 *integration site end-to-end testing*

	ISO/TR 17400:2003	3.4	TC20/SC14/WG3

1002 launch pad site end-to-end testing
integration site end-to-end testing

launch pad or integration site development phase including the testing and evaluation of its overall readiness to support a launch vehicle and a spacecraft

794 *integration site support system*

	ISO/TR 17400:2003	3.5	TC20/SC14/WG3

1003 launch pad site support system
integration site support system

component launch pad or integration site, which enables the main system to operate

795 *intended use*

	ISO 17546:2016	3.19	TC20/SC14/WG1

1004 use of a product, process or service in accordance with specifications, instructions and information provided by the supplier [9]

[9] IEC 62133, Secondary cells and batteries containing alkaline or other non-acid electrolytes -
Safety requirements for portable sealed secondary cells, and for batteries made from them, for use
in portable applications

796 *intercalation*

	ISO 17546:2016	3.18	TC20/SC14/WG1

1005 process where lithium ions are reversibly removed or inserted into a host material without causing significant structural change to that host. [8]

[8] NAVSEA S9310-AQ-SAF-10 SEOND REVISON. TECHNICAL MANUAL FOR NAVY LITHIUM BATTERY SAFETY PROGRAM RESPONSIBILITIES AND PROCEDURES”

797 *interchangeability*

	ISO 10795:2019	3.130	TC20/SC14/WG5

1006 situation when two or more items (3.134) possess such functional and physical characteristics (3.41) as to be equivalent in performance (3.166) and durability and capable of being exchanged one for another without alteration of the items themselves or adjoining items except for adjustment and without selection for fit or performance
Note 1 to entry: Functional and physical characteristics that constitute interchangeability are as follows.
– It is necessary that items have the same design (3.82, 3.83) envelope and have no use limitations imposed.
– It is necessary that items utilize the same attachments, mountings, or mating surfaces.
– It is necessary that attachments, connectors, wiring, GSE, and tubing be the same to the extent that no rework (3.205) is required on installation.
– It is necessary that items meet all baseline (3.31) design requirements (3.201) for performance. Performance or durability design requirements include the same safety (3.210), strength, electrical, mechanical, reliability (3.198), maintainability (3.144), tolerance, balance and mass requirements.
– It is necessary that items have the same adjustments, testing, operation, and maintenance (3.145) requirements and the same design to the extent that the same test (3.239) procedures (3.170), specifications (3.227), and operating procedures may be utilized

798 *interchangeable*

	ISO 10795:2019	3.131	TC20/SC14/WG5

1007 <of an item> having identical external form, fit, and function (3.110) with another item (3.134), allowing its use as a replacement

799 *interested party*

	ISO 11231:2019	3.1.11	TC20/SC14/WG5

1008 interested party (preferred term)
stakeholder (admitted term)

person or organization that can affect, be affected by, or perceive itself to be affected by a decision or activity
EXAMPLE Customers, owners, people in an organization, providers, bankers, regulators, unions, partners or society that can include competitors or opposing pressure groups.
[SOURCE: ISO 9000:2015, 3.2.3, modified — Note 1 to entry has been removed]

800 *interface*

I/F	**ISO 10795:2019**	3.132	TC20/SC14/WG5

1009 mechanical, thermal, electrical, or operational common boundary between two elements of a system (3.234)

	ISO 15389:2001	3.8	TC20/SC14/WG3

1010 region of mating or boundary between separating or cooperating elements established by a governing characteristic
EXAMPLES Ground-to-vehicle interface, physical interface, or responsibility interface.

801 *Interface Control Document*

ICD	**ISO 10795:2019**	3.133	TC20/SC14/WG5

1011 specification (3.227) that describes the characteristics (3.41) that must be controlled at the boundaries between systems (3.234), subsystems (3.231) and other elements
[SOURCE: ISO 15388:2012, 3.1.27]

ICD	**ISO 15388:2012**	3.1.27	TC20/SC14/WG6

1012 specification that describes the characteristics that must be controlled at the boundaries between systems, subsystems and other elements

ICD	**ISO 24917:2010**	3.14	TC20/SC14/WG2

1013 document of launcher and fairing/payload which defines all physical, electrical and mechanical interfaces between the payload and the launch vehicle hardware and software, and interfaces between payload and support equipment and space site facilities, systems and hardware used for spacecraft launch preparation

ICD	**ISO/TR 16158:2013**	3.6	TC20/SC14/WG3

1014 formal means of describing the inputs and outputs of a system, the interfaces among systems, or the protocols among physical or electronic elements of an entity

802 *interface control document for ground support equipment*

	ISO 17689:2015	2.1	TC20/SC14/WG2

1015 document which describes mechanical, hydraulic, pneumatic, thermal, electric and other parameters of interfaces between ground support equipment and launch vehicle, items of ground support equipment, ground support equipment and launch site objects (building constructions with technical systems), and which is used to control these parameters

803 *interfaces controller*

	ISO 17689:2015	2.13	TC20/SC14/WG2

1016 specialist in the scope of launch complexes or organization of space activity which controls ICD observance by organization-executor at realization of contract of space technics creation
Note 1 to entry: Interface controller may be indicated in contract between space technics leading developer and executors. Leading developer can let a contract with controller.

804 *internal charging*

	ISO 14302:2002	3.1.9	TC20/SC14/WG1

1017 phenomenon caused by penetration of high-energy electrons through spacecraft structures and/or component walls so that these particles are incident on ungrounded metallic or dielectric internal surfaces

805 *internal magnetic field*

	ISO 17520:2016	2.1	TC20/SC14/WG4

1018 internal (main) magnetic field
magnetic field produced by the sources inside the Earth's core
Note 1 to entry: See ISO 16695.
Note 2 to entry: It can be presented by the International Geomagnetic Reference Field (IGRF) model.

ISO 22009:2009 2.1 TC20/SC14/WG4

1019 ⟨main magnetic field⟩ magnetic field produced by the sources inside the earth's core
NOTE It can be presented in the form of a series of spherical harmonic functions. The expansion coefficients [International Geomagnetic Reference Field (IGRF) model] undergo very slight changes in time. The International Association of Geomagnetism and Aeronomy (IAGA) is responsible for IGRF model development and modifications and approves its coefficients every five years. Internal magnetic field is not addressed by this International Standard.

806 *internal resistance*

ISO 17546:2016 3.20 TC20/SC14/WG1

1020 opposition to the flow of current within a cell or a battery, that is, sum of electronic resistance and ionic resistance with the contribution to total effective resistance including inductive/capacitive properties

807 *International Geomagnetic Reference Field model*

IGRF model **ISO 17520:2016** 2.2 TC20/SC14/WG4

1021 geomagnetic reference field in the form of a series of spherical harmonic functions
Note 1 to entry: See Reference [2].
Note 2 to entry: The expansion coefficients undergo very slight changes in time.
Note 3 to entry: The International Association of Geomagnetism and Aeronomy (IAGA) is responsible for IGRF model development and modifications and approves its coefficients every five years. The internal magnetic field is not the subject of this International Standard.

IGRF model **ISO 17761:2015** 2.1 TC20/SC14/WG4

1022 geomagnetic reference field in the form of a series of spherical harmonic functions.[10]
Note 1 to entry: The International Association of Geomagnetism and Aeronomy (IAGA) is responsible for IGRF model development and modifications and approves its coefficients every five years [10]
[10] IGRF model - http://www.ngdc.noaa.gov/IAGA/vmod/igrf.html

808 *international launch site*

ISO/TR 17400:2003 3.2 TC20/SC14/WG3

1023 land, ground/airborne/marine facilities, equipment, utilities, and infrastructure, created with the cooperation of several countries or the entities that belong to more than one country, necessary for the launch operations of launch vehicle and payload and for in-flight operations during the launch phase

809 *interplanetary*

ISO 14200:2012 3.7 TC20/SC14/WG4

1024 applicable regime of the meteoroid environment model from Earth with astronomical units (AU)

810 *interplanetary electric field*

E_{KL}	**ISO/TR 23989:2020**	3.2	TC20/SC14/WG4

1025 electric field, affecting the magnetosphere in course of the solar wind (3.1) – magnetosphere coupling, calculated according to formula of Kan and Lee [1979]
$E_{KL} = vB_T \sin^2\theta/2$
where
v is the solar wind speed;
B_T is tangential component of the interplanetary magnetic field (3.3);
θ is clock angle between the IMF tangential (B_T) component and the geomagnetic dipole

811 *interplanetary magnetic field*

IMF	**ISO/TR 23989:2020**	3.3	TC20/SC14/WG4

1026 magnetic field of solar origin transmitted by solar wind (3.1)

IMF	**ISO/TS 21979:2018**	3.8	TC20/SC14/WG4

1027 geomagnetic index used in external magnetic field model computation that corresponds to the part of the Sun's magnetic field that is carried into interplanetary space by solar wind
Note 1 to entry: The three orthogonal components of the IMF are Bx, By, and Bz. Bx and By are oriented parallel to the ecliptic.
Note 2 to entry: The IMF is a weak field, varying in strength near Earth from 1 to 37 nT, with an average of about 6 nT.

812 *interplanetary space*

	ISO 17851:2016	3.1 Terms related to regions in space 3.1.4	TC20/SC14/WG4

1028 region of space limited by sphere with radius equal to average distance of the most remote from the Sun planet

813 *intersystem interference*

	ISO 14302:2002	3.1.10	TC20/SC14/WG1

1029 harmful interaction between two different systems
EXAMPLE launch vehicle docking with a space station.

814 *intrasystem interference*

	ISO 14302:2002	3.1.11	TC20/SC14/WG1

1030 harmful interaction between two different subsystems or between equipment of different subsystems that are all part of the same space system
EXAMPLE Uncommanded operation of a flight control subsystem due to a radio frequency (RF) transmission originating on the same spacecraft.

815 *inverted potential gradient*

	ISO 11221:2011	2.13	TC20/SC14/WG4

1031 inverted potential gradient (preferred term)
inverted voltage gradient (admitted term)

result of differential charging where the insulating surface or dielectric reaches a positive potential with respect to the neighbouring conducting surface or metal
NOTE This phenomenon is also known as PDNM (positive dielectric negative metal).

	ISO 19923:2017	3.3	TC20/SC14/WG4

1032 result of differential charging where the insulating surface or dielectric reaches a positive potential with respect to the neighbouring conducting surface or metal: PDNM (positive dielectric negative metal)

816 *inverted voltage gradient*

	ISO 11221:2011	2.13	TC20/SC14/WG4

1033 inverted potential gradient (preferred term)
inverted voltage gradient (admitted term)

result of differential charging where the insulating surface or dielectric reaches a positive potential with respect to the neighbouring conducting surface or metal
NOTE This phenomenon is also known as PDNM (positive dielectric negative metal).

817 *ionizing radiation*

	ISO 15856:2010	3.1.9	TC20/SC14/WG4

1034 any type of radiation consisting of charged particles or uncharged particles or both, that, as a result of physical interaction, creates ions of opposite signs by either primary or secondary processes
NOTE Charged particles could be positive or negative electrons, protons or other heavy ions, and uncharged particles could be X-rays, gamma rays, or neutrons.

818 *Ionosphere*

	ISO 16457:2014	2.1	TC20/SC14/WG4

1035 region of the Earth's atmosphere in the height interval from 50 km to 1 500 km containing weakly ionized cold plasma

819 *Ionosphere global index*

IG	ISO 16457:2014	2.11	TC20/SC14/WG4

1036 ionosphere-effective sunspot number [56] that is obtained by adjusting the CCIR maps [7] to global ionosonde measurements of the F2 plasma critical frequency foF2

820 *ionospheric storm*

	ISO 16457:2014	2.5	TC20/SC14/WG4

1037 storm lasting about a day, documented by depressions and/or enhancements of the ionospheric electron density during various phases of the storm
Note 1 to entry: Ionospheric storms are the ultimate result of solar flares or coronal mass ejections, which produce large variations in the particle and electromagnetic radiation that hit Earth's magnetosphere and ionosphere, as well as large-scale changes in the global neutral wind, composition, and temperature.

821 *irradiance*

	Reference	N clause/subclause	TC/SC/WG
	ISO 15387:2005	3.12	TC20/SC14/WG1

1038 radiant power incident upon unit area of surface
NOTE It is expressed in watts per square metre ($W \cdot m^{-2}$).

	Reference	N clause/subclause	TC/SC/WG
	ISO 15856:2010	3.1.20	TC20/SC14/WG4

1039 ⟨at a point on a surface⟩ quotient of the radiant flux incident on an element of the surface containing the point, by the area of that element

	Reference	N clause/subclause	TC/SC/WG
	ISO 16378:2013	3.6	TC20/SC14/WG6

1040 at a point on a surface, $E = d\Phi/dA$ [$W \cdot m^{-2}$], where $d\Phi$ is the radiant flux incident on an element of the surface with area dA
[SOURCE: ISO 80000-7]

822 *irradiation*

	Reference	N clause/subclause	TC/SC/WG
	ISO 15387:2005	3.13	TC20/SC14/WG1

1041 integration of irradiance over a specified period of time
NOTE It is expressed in megajoules per square metre ($MJ \cdot m^{-2}$) per hour, day, week, month or year.

	Reference	N clause/subclause	TC/SC/WG
	ISO 23038:2018	3.6	TC20/SC14/WG1

1042 exposure of a substance to energetic particles that penetrate the material and have the potential to
transfer energy to the material

823 *isolated firing mode*

	Reference	N clause/subclause	TC/SC/WG
	ISO 17540:2016	2.11 Low-thrust engine operation modes 2.11.6	TC20/SC14/WG2

1043 separate firing mode
LTE operation mode where the engine returns to the initial state during the off-time (2.9.10)

824 *item*

	Reference	N clause/subclause	TC/SC/WG
	ISO 10795:2019	3.134	TC20/SC14/WG5

1044 <space system> node of a product (3.173) breakdown structure (3.30)
Note 1 to entry: Any part, component (3.48) device, subsystem (3.231), functional unit (3.93), equipment (3.93) or system (3.234) that can be individually considered.
Note 2 to entry: An item can be considered either as a “product” or a “component” on a “product breakdown structure” of more than two levels of decomposition. Items are designated “products” when described as being decomposed and designated “components” when described as decompositions.

	Reference	N clause/subclause	TC/SC/WG
	ISO 14952-1:2003	2.16	TC20/SC14/WG6

1045 assembly, component, subsystem, or system

	Reference	N clause/subclause	TC/SC/WG
	ISO 21350:2007	3.5	TC20/SC14/WG5

1046 piece of hardware or software or combination of hardware and/or software, usually self-contained, which performs a distinctive function

825 *Jacchia-Bowman 2008 Model*

JB2008	**ISO 14222:2013**	2.6	TC20/SC14/WG4

1047 model that describes the neutral temperature and the total density in Earth' s thermosphere and exosphere
Note 1 to entry: Its new features lead to a better and more accurate model representation of the mean total density compared with previous models, including the NRLMSISE-00.
Note 2 to entry: It is valid for use from an altitude of 120 km to 2 500 km in the exosphere. Four solar indices and two geomagnetic activity indices are used in this model: F107 (both tabular value one day earlier and the 81-day average centred on the input time); S10.7 (both tabular value one day earlier an d the 81-day average centred on the input time) ; M107 (both tabular value five days earlier and the 81-day average centred on the input time); Y107 (both tabular value five days earlier an d the 81-day average centred on the input time); ap (3 hour tabular value); and Dst (converted an d input as a dTc temperature change tabular value on the input time) .

Note 3 to entry : See Reference [2] in standard

826 *jet injector*

	ISO 17540:2016	2.12 Chamber (gas generator) components 2.12.8	TC20/SC14/WG2

1048 engine injector whereby liquid or gas escapes in the form of one or several streams

827 *jet vane*

	ISO 17540:2016	2.24 Devices and methods of control efforts creation in engines 2.24.3	TC20/SC14/WG2

1049 profiled rotary element mounted on the combustion product flow near the nozzle exit and have two working surfaces streamlined by the flow

828 *Key characteristic*

	ISO 10795:2019	3.135	TC20/SC14/WG5

1050 attribute or feature whose variation has a significant effect on product (3.173) fit, form, function (3.110), performance (3.166), service life, or producibility, that requires specific actions (3.9) for the purpose of controlling variation
[SOURCE: EN 9100:2016, modified – The article “an” has been removed from the definition for consistency with ISO/IEC Directives Part 2, 2018 edition.]

829 *key process parameter*

KPP	**ISO 21648:2008**	2.1.23	TC20/SC14/WG1

1051 critical process parameter that affects design and product characteristics

830 *knockdown coefficient*

	ISO 16454:2007	3.16	TC20/SC14/WG1

1052 empirical coefficient, other than design safety factor, which is used to determine analytically in a simple way actual or allowable loads or stresses, and which is defined on the basis of test results of flight-type structures, model structures or structural members as compared with corresponding stress analysis data

831 *Kp and ap*

	ISO/TS 21979:2018	3.3	TC20/SC14/WG4

1053 planetary indices that are based on 3-hour measurements from 13 ground stations
Note 1 to entry: Values of ap range from 0 to 400 and are expressed in units of 2 nT. Kp is essentially the logarithm of ap, with its scale of 0 to 9 being expressed in thirds of a unit (e.g., 5- = 4 2/3, 5o = 5, 5+ = 5 1/3). A daily index (Ap) is obtained by averaging the eight values of ap for each day and the index Ap can have values intermediate to those of ap

832 *kp index*

kp	**ISO 16457:2014**	2.8	TC20/SC14/WG4

1054 planetary three-hour index of geomagnetic activity characterizing the disturbance in the Earth's magnetic field over three-hour universal time (UT) intervals
Note 1 to entry: The index scale is uneven quasi-logarithmic and expressed in numbers from 0 to 9.

833 *Kp-index*

	ISO 17520:2016	2.15	TC20/SC14/WG4

1055 three-hour planetary geomagnetic index of activity based on the K index from 13 stations distributed around the world
Note 1 to entry: The Kp-index is originally derived at GeoForschungsZentrum in Germany. The web address should be
http://www.gfzpotsdam.de/en/research/organizationalunits/departments/department-2/earthsmagnetic-field. It is also available at www.swpc.noaa.gov.

834 *laboratory environment*

	ISO 16290:2013	2.7	TC20/SC14/WG5

1056 controlled environment needed for demonstrating the underlying principles and functional performance
Note 1 to entry: The laboratory environment does not necessarily address the operational environment (2.11).

835 *Large fluxes*

Large	*L*	**ISO/TR 18147:2014**	2	TC20/SC14/WG4

1057 Large fluxes (fluences or peak fluxes)
Fluxes, sizes that exceed probability 0,1 or occurred at the 0,9 confidence level.

836 *launch*

	ISO 14620-2:2019	3.8	TC20/SC14/WG5

1058 nitial action to place, or attempt to place, a launch vehicle and payload, if any, in a suborbital trajectory, in Earth orbit in outer space, or otherwise in outer space

	ISO 14620-3:2005	3.3	TC20/SC14/WG5

1059 initial action to place, or attempt to place, a launch vehicle and payload, if any, in a suborbital trajectory, in Earth orbit in outer space, or otherwise in outer space

837 *launch campaign*

	ISO 10795:2019	3.136	TC20/SC14/WG5

1060 launch activities that include launcher (3.139) preparation and final integration (3.129), payload (3.165) processing and integration on the launcher, and launch operations (3.137) including flight data gathering
[SOURCE: EN 16601-00-01:2015, 2.3.115]

838 *launch complex*

	ISO 14620-2:2019	3.9	TC20/SC14/WG5

1061 site assigned to or owned by a launch (3.8) vehicle operator (3.15) to operate a launch vehicle

	ISO 17689:2015	2.6	TC20/SC14/WG2

1062 site assigned to or owned by a launch vehicle operator to operate a launch vehicle
[SOURCE: ISO 14620-2:2011, 3.14]

839 *launch complex modernization*

LC modernization	**ISO 20892:2018**	3.1	TC20/SC14/WG5

1063 set of works undertaken to improve and upgrade the performance characteristics and LC quality indicators by changing the design of the LC components
Note 1 to entry: Also includes replacement of individual items to newly created ones, as well as changes and additions to the existing design.
Note 2 to entry: Modernization also refers to upgrade in this document.

840 *launch nozzle*

	ISO 17540:2016	2.19 Turbine pump components 2.20.6	TC20/SC14/WG2

1064 nozzle (2.12.16) or group of nozzles in the turbine rotor providing turbine pump rotor spin-up at engine launch

841 *launch operations*

	ISO 10795:2019	3.137	TC20/SC14/WG5

1065 all launching related activities taking place after completion of the activities necessary to deliver a fully integrated launcher (3.139) up to reception of post-flight data
[SOURCE: EN 16601-00-01:2015, 2.3.117]

842 *launch operator*

	ISO/TS 20991:2018	3.3	TC20/SC14/WG1

1066 private or institutional entity in charge of launching spacecraft
Note 1 to entry: This entity is in charge of the corresponding ICD with the launcher, and operates or delegates the launch in accordance with the contract.

843 *launch pad*

	ISO 16159:2012	2.10	TC20/SC14/WG3

1067 equipment and facility designed to provide for the pre-launch and launch operations of spacecraft
[ISO/TR 17400:2003, definition 3.3]

	ISO 24917:2010	3.9	TC20/SC14/WG2

1068 equipment and facility designed to provide for the pre-launch and launch operations of spacecraft
[ISO/TR 17400:2003, definition 3.3]

	ISO 26870:2009	3.7	TC20/SC14/WG3

1069 equipment and facility designed to provide for the pre-launch and launch operations of spacecraft
[ISO/TR 17400:2003, definition 3.3]

	ISO/TR 17400:2003	3.3	TC20/SC14/WG3

1070 equipment and facility designed to provide for the pre-launch and launch operations of spacecraft

844 *launch pad for space launch vehicle*

	ISO 24917:2010	3.10	TC20/SC14/WG2

1071 device intended to maintain the space launch vehicle in readiness for launch, and for the launch itself

845 *launch pad site end-to-end testing*

	ISO/TR 17400:2003	3.4	TC20/SC14/WG3

1072 launch pad site end-to-end testing
integration site end-to-end testing
launch pad or integration site development phase including the testing and evaluation of its overall readiness to support a launch vehicle and a spacecraft

846 *launch pad site support system*

	ISO/TR 17400:2003	3.5	TC20/SC14/WG3

1073 launch pad site support system
integration site support system

component launch pad or integration site, which enables the main system to operate

847 *launch phase*

	ISO 14620-2:2019	3.10	TC20/SC14/WG5

1074 period which begins when the launch (3.8) vehicle is no longer in physical contact with the launch complex (3.9) or the carrier aircraft and continues up to the end of the mission assigned to it including disposal and passivation actions
Note 1 to entry: The launch phase ends when any planned and unplanned physical contact with the ground or destruction or breakdown of the vehicle takes place.

848 *launch processing system*

ISO 15389:2001 3.9 TC20/SC14/WG3

1075 operating consoles, data handling and display equipment, and the associated transmission system configured issue commands and analyse and display response data required in checkout and operation of ground support equipment (GSE) and flight hardware

849 *launch range*

ISO 17689:2015 2.5 TC20/SC14/WG2

1076 systems, facilities and means, not part of the launch system, required to provide the necessary service and support for carrying out a launch campaign and to ensure safety and security of persons, assets and protection of the environment

850 *launch segment*

ISO 10795:2019 3.138 TC20/SC14/WG5

1077 part of a space system (3.223) that is used to transport space segment element(s) (3.222) into space
Note 1 to entry: A launch segment is composed of one or more launch segment elements.
Note 2 to entry: A launch segment is composed of the integrated launcher (3.139) and needed facilities for manufacturing (if manufacturing hardware (3.119) is foreseen on the launch base), testing and delivering launcher elements.
[SOURCE: EN 16601-00-01:2015, 2.3.119, modified – Note 2 to entry has been specified.]

851 *launch Service Customer*

ISO 20892:2018 3.2 TC20/SC14/WG5

1078 organization that made a contract with the operator (3.10) to perform launch services (3.3)

852 *launch service provider*

ISO 14954:2005 3.1.3 TC20/SC14/WG1

1079 organization that conducts a launch with a launch vehicle

853 *launch services*

ISO 20892:2018 3.3 TC20/SC14/WG5

1080 set of actions for the launch or attempted launch of a launch vehicle and payload, if any, to a sub-orbital trajectory of the Earth's orbit in outer space or in any other direction in space

854 *launch site*

ISO 14620-2:2019 3.11 TC20/SC14/WG5

1081 site necessary for the prelaunch and launch (3.8) operations of a space vehicle and for the in-flight operations during the launch phase (3.10)

ISO 17689:2015 2.3 TC20/SC14/WG2

1082 site necessary for the prelaunch and launch operations of a space vehicle and for the in-flight operations during the launch phase
[SOURCE: ISO 14620-2:2011, 3.16]

855 *launch site country*

	ISO 14620-2:2019	3.12	TC20/SC14/WG5

1083 country that has jurisdiction over a specified launch site (3.11)

856 *launch system*

	ISO 14620-2:2019	3.13	TC20/SC14/WG5

1084 system made up of a launch (3.8) vehicle, the associated launch complex (3.9), launch site (3.11), payload, ground support equipment and associated airborne equipment (including software), control systems, navigation system, trajectories, procedures, necessary personnel, and any other associated items

	ISO 14622:2000	2.4	TC20/SC14/WG1

1085 system including the space flight vehicle and corresponding installations, the ground equipment, hardware, software, procedures, services and personnel required for operations

	ISO 17689:2015	2.4	TC20/SC14/WG2

1086 system made up of a launch vehicle, the associated launch complex, launch site, payload, ground support equipment and associated airborne equipment (including software), control systems, navigation system, trajectories, procedures, necessary personnel, and any other associated items
[SOURCE: ISO 14620-2:2011, 3.18]

857 *launch turbine*

	ISO 17540:2016	2.19 Turbine pump components 2.20.5	TC20/SC14/WG2

1087 turbine (2.20.3) providing turbine pump rotor spin-up at engine launch

858 *launch vehicle*

	ISO 10795:2019	3.139	TC20/SC14/WG5

1088 launcher
launch vehicle

vehicle designed to transport payloads (3.165) to space
[SOURCE: EN 16601-00-01:2015, 2.3.127, modified – NOTE 1 has been removed; the term "launch vehicle" has been added as an alternative.]

	ISO 14622:2000	2.2	TC20/SC14/WG1

1089 one or more space flight vehicle stages capable of launching one or more space vehicles and placing them in orbit

	ISO 17689:2015	2.7	TC20/SC14/WG2

1090 any vehicle constructed for the purpose of operating in outer space, or placing one or more payloads in outer space, as well as any suborbital rocket
[SOURCE: ISO 14620-2:2011, 3.19]

	ISO 24113:2019	3.12	TC20/SC14/WG7

1091 launch vehicle
DEPRECATED: launcher
system designed to transport one or more payloads into outer space

	ISO 26871:2012	3.1.23	TC20/SC14/WG1

1092 launcher
launch vehicle
system used to transport a payload into orbit

859 *launch vehicle orbital stage*

	ISO 14200:2012	3.8	TC20/SC14/WG4

1093 stage of a launch vehicle that is designed to achieve orbit
[SOURCE: ISO 24113:2011, definition 3.9]

	ISO 24113:2019	3.13	TC20/SC14/WG7

1094 complete element of a launch vehicle (3.12) that is designed to deliver a defined thrust during a dedicated phase of the launch vehicle's operation and achieve orbit
Note 1 to entry: Non-propulsive elements of a launch vehicle, such as jettisonable tanks, multiple payload structures or dispensers, are considered to be part of a launch vehicle orbital stage while they are attached.

860 *launch vehicle system*

LV system	**ISO 14303:2002**	2.2	TC20/SC14/WG2

1095 launch vehicle and associated launch services supplied by the launch services contractor or subcontractors or both

861 *launcher*

	ISO 10795:2019	3.139	TC20/SC14/WG5

1096 launcher
launch vehicle

vehicle designed to transport payloads (3.165) to space
[SOURCE: EN 16601-00-01:2015, 2.3.127, modified – NOTE 1 has been removed; the term "launch vehicle" has been added as an alternative.]

	ISO 24113:2019	3.12	TC20/SC14/WG7

1097 launch vehicle
DEPRECATED: launcher
system designed to transport one or more payloads into outer space

	ISO 26871:2012	3.1.23	TC20/SC14/WG1

1098 launcher
launch vehicle
system used to transport a payload into orbit

862 *launcher stage*

	ISO 10795:2019	3.140	TC20/SC14/WG5

1099 complete element of a launcher (3.139) that delivers the defined thrust during dedicated phase of the launcher mission (3.154)
Note 1 to entry: A launcher stage typically consists of a main propulsion system (3.234), a reaction controlled system (sometimes integrated to some extent with the main propulsion system), supporting structure, forward and aft skirts, aerodynamic control and/or stabilized surfaces, a separation system and a destruction system.
Note 2 to entry: Some of the upper stages are also equipped with an avionics system.
[SOURCE: EN 16601-00-01:2015, 2.3.130, modified – NOTE 3 has been removed.]

863 *Launching State*

ISO 24113:2019 3.14 TC20/SC14/WG7

1100 State that launches or procures the launching of a spacecraft (3.25), or State from whose territory or facility a spacecraft is launched
Note 1 to entry: This definition is consistent with the definition in the UN Liability Convention[5] and the UN General Assembly's Resolution 59/115 on the notion of the Launching State[6].

864 *leakage*

ISO 17546:2016 3.21 TC20/SC14/WG1

1101 visible escape of electrolyte or other material from a cell or battery or the loss of material (except battery casing, handling devices or labels) from a cell or battery such that the loss of mass exceeds the values in Table 2.
Note 1 to entry: Mass loss means a loss of mass that exceeds the values in Table 2.
Table 2.-Table of mass loss limit

Mass M of cell	Mass loss limit
M < 1 g	0,5 %
l g ≤ M ≤ 75 g	0,2 %
M > 75 g	0,1 %

Note 2 to entry: In order to quantify the mass loss, the following procedure is provided:
Mass loss (%)=((M1 - M2)/M1)) x 100
where M1 is the mass before the test and M2 is the mass after the test. When mass loss does not exceed the values in the Table2, it shall be considered as "no mass loss". [6]

[6] ST/SG/AC. 10/11/Rev.5/Amend.1, "United Nations Transport of Dangerous Goods UN Manual of Tests and Criteria, Part III, sub-section 38.3 Fifth revised edition Amendment 1"

[6] ST/SG/AC. 10/11/Rev.5/Amend.1, "United Nations Transport of Dangerous Goods UN Manual of Tests and Criteria, Part III, sub-section 38.3 Fifth revised edition Amendment 1"

865 *leak-before-burst*

LBB **ISO 10785:2011** 3.18 TC20/SC14/WG1

1102 design concept which shows that at maximum expected operating pressure (MEOP) [3.20] potentially critical flaws will grow through the wall of a metallic pressurized hardware item and cause pressure relieving leakage rather than burst or rupture (catastrophic failure)
NOTE Adapted from ISO 14623:2003, definition 2.35.

LBB **ISO 14623:2003** 2.35 TC20/SC14/WG1

1103 design concept which shows that at MEOP potentially critical flaws will grow through the wall of a metallic pressurized hardware item or the metal liner of a composite overwrapped pressure vessel and cause pressure relieving leakage rather than burst or rupture (catastrophic failure)

LBB **ISO 21347:2005** 3.18 TC20/SC14/WG1

1104 design concept which shows that, at maximum expected operating pressure (MEOP), potentially critical flaws will grow through the wall of a metallic pressurized hardware item or the metal liner of a composite-overwrapped pressure vessel (COPV) and cause pressure-relieving leakage rather than burst or rupture (catastrophic failure)

866 *LEO-crossing orbit*

	ISO 27852:2016	3.1.4	TC20/SC14/WG3

1105 low-earth orbit, defined as an orbit with perigee altitude of 2 000 km or less
Note 1 to entry: As can be seen in Figure A.1, orbits having this definition encompass the majority of the high spatial density spike of spacecraft and space debris.

867 *lessons learning*

	ISO 18238:2015	3.3	TC20/SC14/WG5

1106 process of distributing the problem information to the whole project and organization as well as other related projects and organizations, warning if similar failure modes or mechanism issues exist and taking preventive actions.

868 *lethal collision*

	ISO 16126:2014	3.8	TC20/SC14/WG7

1107 collision leading to the loss of a critical component on a spacecraft

869 *level one processing*

	ISO 20930:2018	3.3	TC20/SC14/WG1

1108 type of processing where the antenna brightness temperature of the sensor instrument is calculated and compensated radiometrically and geometrically based on evaluation results of ground test and on-orbit calibration

870 *life*

	ISO 17546:2016	3.22	TC20/SC14/WG1

1109 duration of maintaining a required performance
(e.g. 50% of BOL capacity), estimated in years (calendar life) or in the number of charge/discharge cycle [3]

[3] JSC20793 rev.B, "CREWED SPACE VEHICLE BATTERY SAFETY REQUIREMENTS"

871 *life cycle*

	ISO 10795:2019	3.141	TC20/SC14/WG5

1110 all phases of acquisition, operation and logistic support of an item (3.134) beginning with requirement (3.201) identification through disposal of the item

	ISO 21351:2005	3.1.8	TC20/SC14/WG5

1111 time interval between the conceptual exploration of the product introduction to its withdrawal from service

872 *life cycle cost*

	ISO 10795:2019	3.142	TC20/SC14/WG5

1112 total cost estimated and eventually incurred in connection with a system (3.234) during its acquisition, operation, maintenance (3.145), and disposal
Note 1 to entry: Life cycle cost can also be referred to as the total cost of ownership.

873 *life factor*

	ISO 10786:2011	3.29	TC20/SC14/WG1

1113 coefficient by which the number of cycles or time is multiplied in order to account for uncertainties in the statistical distribution of loads and cycles, as well as uncertainties of the methodology used in the life related analyses
NOTE 1 Life factor and scatter factor are interchangeable terms in some documents.
NOTE 2 Life factor is sometimes referred to as scatter factor when uncertainties are material uncertainties.
EXAMPLE Factors used in fatigue (life) analysis and damage tolerance life (crack growth safe-life) analysis.

	ISO 21648:2008	2.1.24	TC20/SC14/WG1

1114 factor by which the service life is multiplied to obtain total fatigue life or damage tolerance life
NOTE Life factor is often referred to as a scatter factor that is normally used to account for the scatter of a material’s fatigue or crack growth rate data. It can also account for the dispersion of loading spectra parameters and other uncertainties, when appropriate.

874 *Life Support Systems*

LSS	ISO 16157:2018	3.5	TC20/SC14/WG6

1115 ystems supporting mass and energy exchange between space traveller’s body and habitable

LSS	ISO 16726:2018	3.5	TC20/SC14/WG6

1116 systems supporting mass and energy exchange between space traveller’s body and habitable environment inside MSC
[SOURCE: ISO 16157, 3.5]

875 *lifetime*

	ISO 10795:2019	3.143	TC20/SC14/WG5

1117 period over which any of the item (3.134) properties are required to be within defined limits
[SOURCE: ISO 26871:2012, 3.1.24, modified – The words “of the item” have been added to the definition.]

	ISO 26871:2012	3.1.24	TC20/SC14/WG1

1118 period over which any properties are required to be within defined limits

876 *lift-off*

	ISO 15389:2001	3.10	TC20/SC14/WG3

1119 term designating the instant of flight at which the vehicle’s contact is terminated with all areas of hold-down and/or support devices
NOTE Lift-off is commonly called "first motion" of the vehicle.

	ISO 15862:2009	2.3	TC20/SC14/WG2

1120 launch vehicle motion when the vehicle's contact is terminated with launch pad or other support devices
NOTE This is commonly called “first motion” of the vehicle. Possible abnormal cut-off is also included.

877 *light gas gun*

LGG	**ISO 11227:2012**	3.1.7	TC20/SC14/WG7

1121 experimental device consisting of a powder gun that compresses a low-density gas to accelerate a projectile up to hypervelocities

878 *limit load*

	ISO 10785:2011	3.19	TC20/SC14/WG1

1122 maximum expected load, or combination of loads, which a structure or a component in a structural assembly is expected to experience during its service life, in association with the applicable operating environments
NOTE 1 Load is a generic term for thermal load, pressure, external mechanical load (force, moment, or enforced displacement) or internal mechanical load (residual stress, pretension, or inertial load).
NOTE 2 The corresponding stress or strain is called limit stress or limit strain.
NOTE 3 Limit load is sometimes referred to as design limit load.
NOTE 4 Adapted from ISO 14623:2003, definition 2.36.

LL	**ISO 10786:2011**	3.30	TC20/SC14/WG1

1123 maximum expected load, or combination of loads, which a structure or a component in a structural assembly is expected to experience during its service life in association with the applicable operating environments
NOTE 1 Load is a generic term for thermal load, pressure, external mechanical load (force, moment, or enforced displacement) or internal mechanical load (residual stress, pretension, or inertial load).
NOTE 2 The corresponding stress or strain is called limit stress or limit strain.
NOTE 3 Limit load is sometimes referred to as design limit load. See informative Annex A.

	ISO 14622:2000	2.5.5	TC20/SC14/WG1

1124 maximum load that can be expected during the lifetime and in the presence of the environment

	ISO 14623:2003	2.36	TC20/SC14/WG1

1125 highest predicted load or combination of loads that a structure can experience during its service life in association with the applicable operating environments
NOTE The corresponding stress is called limit stress.

	ISO 15864:2004	3.1.3	TC20/SC14/WG2

1126 maximum predicted load or combination of loads that a structure may experience during its service life in association with the applicable operating environments

	ISO 16454:2007	3.17	TC20/SC14/WG1

1127 maximum that can be expected during service life and in the presence of the environment
NOTE For stabilizing loads, the limit load is the minimum load.

	ISO 21347:2005	3.19	TC20/SC14/WG1

1128 maximum expected external load or combination of loads that a structure can experience during the performance of specified missions in specified environments
NOTE When a statistical estimate is applicable, the limit load is that load not expected to be exceeded at 99 % probability with 90 % confidence.

	ISO 21648:2008	2.1.25	TC20/SC14/WG1

1129 maximum expected external load, or combination of loads, that a rotating part can experience during the performance of a specified mission in specified environments
NOTE When a statistical estimate is applicable, the limit load is that load not expected to be exceeded at 99 % probability with 90 % confidence.

	ISO 24638:2008	3.14	TC20/SC14/WG1

1130 highest predicted load or combination of loads that a structure can experience during its service life, in association with the applicable operating environments
NOTE The corresponding stress is called “limit stress”.

879 *limit pressure*

	ISO 14622:2000	2.6.1	TC20/SC14/WG1

1131 maximum pressure differential that can be expected in service and in the presence of the environment (see 3.2.4) and includes:
- the operating pressure (due either to propellant combustion or to pressurisation);
- transient pressure;
- hydrostatic pressure;
- external pressure.

880 *limit test*

	ISO 17540:2016	2.33 Types of engine tests: Accelerated data accessing 2.33.2	TC20/SC14/WG2

1132 engine test (2.27.1) to the limiting state

881 *Limiting Permissible Concentration*

LPC	**ISO 16726:2018**	3.8	TC20/SC14/WG6

1133 safe concentration of harmful (toxic) substance in the air conditions at a given mission duration for nominal
Note 1 to entry: This concentration determines a «zero risk» level.

882 *line impedance stabilization network*

LISN	**ISO 14302:2002**	3.1.12	TC20/SC14/WG1

1134 network inserted in the supply mains lead of an apparatus to be tested which provides, in a given frequency range, specified source or load impedance for the measurement of disturbance currents and voltages and which may isolate the apparatus from the supply mains in that frequency range

883 *line load of a force*

	ISO 19933:2007	3.1.2	TC20/SC14/WG2

1135 ratio of the resultant axial force applied to the SC centre of gravity (CG) to the perimeter of the SC adaptor interface

884 *line load of a moment*

	ISO 19933:2007	3.1.3	TC20/SC14/WG2

1136 ratio of the resultant moment applied to the SC CG to the surface area delimited by the perimeter of the SC adaptor interface
NOTE The line load definition is not applicable to point-to-point interfaces.

885 *linear energy transfer*

LET	ISO 15856:2010	3.1.10	TC20/SC14/WG4

1137 energy delivered by a charged particle passing through a substance and locally absorbed per unit length of path
NOTE It is measured in joules per metre. Other dimensions are keV·μm−1, J·m2·kg−1, MeV·cm2·g−1, MeV·cm2·mg−1.

LET	ISO 21980:2020	3.12	TC20/SC14/WG4

1138 energy delivered by a charged particle passing through a substance and locally absorbed per unit length of path
Note 1 to entry: It is measured in joules per metre. Other dimensions are keV · μ m^{-1}, J · m^2 · kg^{-1}, MeV · cm2 · mg^{-1}.
[SOURCE: ISO 15856:2010, 3.1.10]

886 *linearity*

	ISO 15387:2005	3.14	TC20/SC14/WG1

1139 performance of a solar cell with respect to:
- the variation of the slope of short-circuit current to irradiance;
- the variation of the slope of open circuit voltage to the logarithm of irradiance;
- the variation of the slope of short-circuit current and open-circuit voltage to cell temperature; and
- the variation of relative spectral response at a specified voltage

887 *lines*

	ISO 24638:2008	3.15	TC20/SC14/WG1

1140 tubular pressure components of a pressurized system provided as a means for transferring fluids between components of the system
NOTE Flexhoses are included.

888 *liquid rocket engine*

LRE	ISO 17540:2016	2.1 General 2.1.2	TC20/SC14/WG2

1141 rocket engine (2.1.1) using propellants in liquid form

889 *liquid rocket propulsion system*

	ISO 17540:2016	2.1 General 2.1.4	TC20/SC14/WG2

1142 propulsion system including engine, propellant tanks, avionics for control sub-systems, pressure vessels and control devices for pneumatic and hydraulic control sub-systems, propellant feed system, actuators for steering sub-systems, and auxiliary equipment

890 *lithic fragments*

	ISO 10788:2014	2.1.7	TC20/SC14/WG4

1143 physically discrete solids of any rock type whose normative composition is within the range of the target terrain
Note 1 to entry: Lithic fragments have texture and mineralogy. Texture is a more important feature than mineralogy for lithic fragments. Texture describes the grain to grain connectivity boundary. Lunar textures cannot be replicated on Earth.

891 *lithium ion battery*

	ISO 17546:2016	3.23	TC20/SC14/WG1

1144 rechargeable electrochemical cell or battery in which the positive and negative electrodes are both intercalation compounds (intercalated lithium exists in an ionic or quasi-atomic form with the lattice of the electrode material) constructed with no metallic lithium in either electrode [6]

[6] ST/SG/AC. 10/11/Rev.5/Amend.1, “United Nations Transport of Dangerous Goods UN Manual of Tests and Criteria, Part III, sub-section 38.3 Fifth revised edition Amendment 1”

892 *load*

	ISO 14622:2000	2.5	TC20/SC14/WG1

1145 response of a space flight vehicle to excitations encountered during its service life

893 *load case*

	ISO 15862:2009	2.4	TC20/SC14/WG2

1146 event in spacecraft service life during which essential mechanical environments are expected

894 *load current*

I_L	**ISO 15387:2005**	3.15	TC20/SC14/WG1

1147 current supplied by the solar cell at a particular temperature and irradiance, into a load connected across its terminals

895 *load power*

P_L	**ISO 15387:2005**	3.17	TC20/SC14/WG1

1148 power supplied to a load connected to the terminals of the solar cell at a particular temperature and irradiance;
NOTE $P_L = V_L \times L_L$.

896 *load profile*

	ISO 17546:2016	3.24	TC20/SC14/WG1

1149 illustration of the power needed form a battery to support a given system, which is usually expressed by graphing required current versus time [8].

[8] NAVSEA S9310-AQ-SAF-10 SEOND REVISON. TECHNICAL MANUAL FOR NAVY LITHIUM BATTERY SAFETY PROGRAM RESPONSIBILITIES AND PROCEDURES”

897 *load voltage*

V *L*	**ISO 15387:2005**	3.16	TC20/SC14/WG1

1150 voltage appearing across the terminals of a load connected to the terminals of the solar cell at a particular temperature and irradiance

898 *loading case*

	ISO 10786:2011	3.31	TC20/SC14/WG1

1151 loading case (preferred term)
combined loading case (admitted term)

particular condition of single (or combined) mechanical load, pressure and temperature, which can occur for some structural components or a structural assembly at the same time during their service life

	ISO 14623:2003	2.37	TC20/SC14/WG1

1152 particular condition of pressure/temperature/loads that can occur for some parts of pressurized structures a the same time during their service life

	ISO 16454:2007	3.19	TC20/SC14/WG1

1153 particular condition described in terms of loads/pressures/temperatures combinations, which can occur for some parts of structure at the same time during its service life

899 *loading spectrum*

	ISO 10786:2011	3.32	TC20/SC14/WG1

1154 representation of the cumulative loading levels and associated cycles anticipated for the structure or component of a structural assembly according to its service life under all expected operating environments
NOTE Significant transportation, test, and handling loads are included in this definition.

	ISO 14623:2003	2.38	TC20/SC14/WG1

1155 representation of the cumulating loading anticipated for the structure under all expected operating environments
NOTE Significant transportation and handling loads are included.

	ISO 24638:2008	3.16	TC20/SC14/WG1

1156 representation of the cumulative loading anticipated for the structure under all expected operating environments
NOTE Significant transportation and handling loads are included.

900 *loads*

	ISO 16454:2007	3.18	TC20/SC14/WG1

1157 volume forces and moments, concentrated and/or distributed over the structure surfaces or structure, caused by its interaction with environment and adjacent parts of vehicle, and accelerations
NOTE This includes pressures, external loads and enforced displacements acted at considered structural element, pretension, inertial loads caused by accelerations and thermal gradients.

901 *local buckling*

ISO 16454:2007 3.20 TC20/SC14/WG1

1158 failure mode, which occurs when an alternative equilibrium mode of a structural member exists, and which could lead to detrimental deformation or rupture of that member if it occurs under loading

902 *long-duration orbit lifetime prediction*

ISO 27852:2016 3.1.5 TC20/SC14/WG3

1159 orbit lifetime prediction spanning two solar cycles or more (e.g. 25-year orbit lifetime)

903 *longitudinal oscillation*

ISO 17540:2016 2.14 Operating process in chamber (gas generator) 2.14.13 TC20/SC14/WG2

1160 pressure high-frequency self-oscillation in combustion chamber (2.12.1) along combustion chamber axis

904 *loss of specific impulse*

ISO 17540:2016 2.19 Flow in nozzle 2.19.7 TC20/SC14/WG2

1161 deflection of real values from the ideal of the combustion product parameters in a nozzle (2.12.16)

905 *lot*

ISO 17546:2016 3.25 TC20/SC14/WG1

1162 continuous, uninterrupted production run with no change in processes or drawings [2]

[2] NASA/TM-2009-2215751:NESC-RP-08-75/06-069-I, ”Guidelines on Lithium-ion Battery Use in Space Applications”

ISO 22538-3:2007 3.1.2 TC20/SC14/WG6

1163 batch
lot
collection of material that has all been made under the same conditions and at the same time, using the same starting materials

ISO 26871:2012 3.1.25 TC20/SC14/WG1

1164 lot
batch
group of components produced in homogeneous groups and under uniform conditions

906 *lot acceptance*

ISO 26871:2012 3.1.26 TC20/SC14/WG1

1165 demonstration by measurement or test that a lot of items meet its requirements

907 *Low Earth Orbit*

	ISO 14200:2012	3.9	TC20/SC14/WG4

1166 Earth orbit with an apogee altitude that does not exceed 2 000 km

908 *low Earth Orbits*

	ISO 17851:2016	3.2 Terms related to orbits 3.2.1	TC20/SC14/WG4

1167 orbits with altitude up to 2 000 km

909 *low level telemetry*

	ISO 14950:2004	3.2.8	TC20/SC14/WG3

1168 elementary readable on-board information
EXAMPLE Register readout or relay status.

910 *low polar orbits*

	ISO 17851:2016	3.2 Terms related to orbits 3.2.2	TC20/SC14/WG4

1169 low polar (Sun synchronous) orbits

orbits with the altitude of 600 km to 800 km and the inclination of 85° to 97°

911 *lower cut-off rigidity*

	ISO 17520:2016	2.9	TC20/SC14/WG4
R_L			

1170 access of particles of all rigidity values lower than the lower cut-off rigidity is forbidden for penetration from outside of the Earth’s magnetic field
Note 1 to entry: R_L is the calculated lowest cut-off value, i.e. the rigidity value of the lowest allowed/forbidden transition obtained in computer simulations.

912 *low-frequency oscillation*

	ISO 17540:2016	2.14 Operating process in chamber (gas generator) 2.14.15	TC20/SC14/WG2

1171 pressure oscillation in the chamber (2.2.1) (gas generator) with frequencies that are smaller than the minimum natural acoustic frequency

913 *low-thrust engine*

	ISO 17540:2016	2.1 General 2.1.3	TC20/SC14/WG2
LTE			

1172 rocket engine (2.1.1) of a thrust not more than 5 000 N

914 *LTE thermal bridge*

	ISO 17540:2016	2.26 Engine thermal protectin 2.26.3	TC20/SC14/WG2

1173 LTE thermal protection item used as device with a thermal resistance and also used for a change of heat flow directed towards LTE construction

915 *LTE total designated resource*

	ISO 17540:2016	2.8 Engine time characteristics, types of operating and resources 2.8.9	TC20/SC14/WG2

1174 operation duration assigned for continuous and pulse modes
Note 1 to entry: In addition to total designated recourse, for LTE (2.1.3), it is also determined designated resource according to the following:
— number of inclusions (2.9.8);
— duration at impulse mode;
— duration at continuous mode;
— total propellant consumption for catalytic LTE.

916 *lunar terrains*

	ISO 10788:2014	2.1.8	TC20/SC14/WG4

1175 mare and highlands

917 *LV/SC separation*

	ISO 16679:2015	3.1	TC20/SC14/WG3

1176 event of disconnection between LV/SC under the control of LV

918 *L-value*

	ISO/TS 21979:2018	3.1	TC20/SC14/WG4

1177 distance to a point where the magnetic lines of force intersect with the equatorial plane of the geomagnetic field from Earth's core, with Re (radius of Earth) used as the unit

919 *magnetic field homogeneity*

	ISO 21494:2019	3.15	TC20/SC14/WG2

1178 ratio (given in %) of the maximum magnetic field deviation in the volume divided by the magnetic field at the centre of the volume, or the range (given in ± values) of the maximum magnetic field deviation in the volume

920 *magnetic field stability*

	ISO 21494:2019	3.14	TC20/SC14/WG2

1179 variation of the magnetic field at the same location during a certain period

921 *Magnetic storm*

	ISO/TR 23989:2020	3.4	TC20/SC14/WG4

1180 combination of strong negative geomagnetic disturbances, which are produced over the entire planet by ring currents flowing around the Earth in the inner magnetosphere
Note 1 to entry: The maximal geomagnetic field depression in the equatorial region (estimated by 1-hour Dst index or 1-min SymH index) is regarded as a storm intensity.
Note 2 to entry: Definition inspired by Chapman and Ferraro, 1932.

922 *magnetic substorm*

	ISO/TR 23989:2020	3.5	TC20/SC14/WG4

1181 magnetic disturbances typical of the auroral zone
Note 1 to entry: Their distinctive feature is formation of the westward and eastward ionospheric currents (electrojets) and development of corresponding negative and positive magnetic disturbances on the ground surface, which intensity is estimated by the 1-min AL and AU indices [Davis and Sugiura, 1966]. The “substorm” includes a lot of accompanying phenomena in the auroral zone, such as sudden auroral brightening (produced by precipitation of the auroral particles), its poleward expansion, simultaneous sudden increase of the westward electrojet intensity and others.
Note 2 to entry: Definition inspired by Akasofu, 1964.

923 *magnetization and demagnetization coil system*

	ISO 21494:2019	3.13	TC20/SC14/WG2

1182 coil system, usually composed of a Helmholtz coil and energized by power supplies, that can provide magnetization and demagnetization fields by applying the system with electric current

924 *magnetization field*

	ISO 21494:2019	3.10	TC20/SC14/WG2

1183 magnetic field used for magnetization tests of the EUT when exposed to a uniform and steady magnetic field for a certain period of time and provided by a magnetization and demagnetization coil system

925 *magnetopause stand-off distance*

	ISO 22009:2009	2.6	TC20/SC14/WG4

1184 geocentric distance to the subsolar point on the magnetopause

926 *magnetospheric magnetic field*

	ISO 17520:2016	2.3	TC20/SC14/WG4

1185 external (magnetospheric) magnetic field
magnetic field produced by magnetospheric sources
Note 1 to entry: It can be described by different models, e.g. Tsyganenko-89 [3] and more recent models.[4][5]

927 *magnetospheric sources of magnetic field*

	ISO 22009:2009	2.3	TC20/SC14/WG4

1186 sources of magnetic fields including the following:
- currents flowing over the magnetopause and screening the geomagnetic dipole magnetic field;
- currents flowing inside the earth's magnetosphere, including
  - tail currents, produced by currents across the geomagnetic tail and closure currents on the magnetopause,
  - ring currents, including symmetrical ring current, circling around the earth and carried by trapped particles and partial ring current, produced by azimuthal currents at low latitudes flowing mostly in the pre-midnight sector, and closed by field-aligned and ionospheric currents,
  - field-aligned currents, produced by currents flowing along the high-latitude magnetic field lines, closed by currents on the magnetopause and in the ionosphere;
- currents flowing over the magnetopause and screening the ring current and partial ring current magnetic fields

NOTE 1 Electric currents flowing entirely in the ionosphere (ionospheric currents) contribute to the magnetic field variation at altitudes below 1 000 km. In the region above 1,5 RE, the effect of the ionospheric current is insignificant.
NOTE 2 Magnetic field of ionospheric currents is not addressed by this International Standard.

928 *main coil system*

	ISO 21494:2019	3.12	TC20/SC14/WG2

1187 coil system, usually composed of Helmholtz or Braunbeck coils and energized by power supplies, that can provide a zero-magnetic field environment within a given volume of the coil system or that can generate a controllable magnetic field environment by applying the system with calibrated electric current levels

929 *main cut-off rigidity*

R_U	ISO 17520:2016	2.10	TC20/SC14/WG4

1188 main (upper) cut-off rigidity
access of particles of all rigidity values higher than the main cut-off rigidity is allowed for penetration from outside of the Earth’s magnetic field
Note 1 to entry: R_U is the rigidity value of the calculated upper cut-off value, i.e. the rigidity value of the highest allowed/forbidden transition obtained in computer simulations.

930 *Main Engine*

	ISO 17540:2016	2.5 Engine types by purpose 2.5.1	TC20/SC14/WG2

1189 engine intended to accelerate the space vehicle

931 *main magnetic field*

	ISO 17520:2016	2.1	TC20/SC14/WG4

1190 internal (main) magnetic field
magnetic field produced by the sources inside the Earth's core
Note 1 to entry: See ISO 16695.
Note 2 to entry: It can be presented by the International Geomagnetic Reference Field (IGRF) model.

932 *main pipeline*

ISO 17540:2016	2.51 Stand system elements 2.51.7	TC20/SC14/WG2

1191 stand pipeline (2.51.6) connected directly to the engine

933 *main stand tank*

ISO 17540:2016	2.51 Stand system elements 2.51.2	TC20/SC14/WG2

1192 stand tank (2.51.1) used for propellant components storage required for the test based on its operating conditions

934 *main system*

ISO 26870:2009	3.8	TC20/SC14/WG3

1193 launch pad or integration site or components primarily responsible for providing preparation and launch of a launch vehicle or spacecraft
[ISO/TR 17400:2003, definition 3.6]

ISO/TR 17400:2003	3.6	TC20/SC14/WG3

1194 launch pad or integration site or components primarily responsible for providing preparation and launch of a launch vehicle or spacecraft

935 *main system factory testing*

ISO/TR 17400:2003	3.7	TC20/SC14/WG3

1195 launch pad or integration site development phase that includes the testing of a completely assembled and checked out main system to determine its operational readiness to be shipped to the operational launch pad or integration site for further testing or operation

936 *main system field testing*

ISO 26870:2009	3.9	TC20/SC14/WG3

1196 launch pad or integration site development phase including the testing of an assembled, fully equipped, and checked out (or factory tested) main system; the testing is conducted at the operational launch pad or integration site to determine the system readiness for further testing or operation
[ISO/TR 17400:2003, definition 3.8]

ISO/TR 17400:2003	3.8	TC20/SC14/WG3

1197 launch pad or integration site development phase including the testing of an assembled, fully equipped, and checked out (or factory tested) main system; the testing is conducted at the operational launch pad or integration site to determine the system readiness for further testing or operation

937 *maintainability*

ISO 10795:2019 3.144 TC20/SC14/WG5

1198 <of an item> ability to be retained in, or restored to a state in which it can perform as required, under given conditions of use and maintenance (3.145)
Note 1 to entry: Given conditions of use may include storage.
Note 2 to entry: Given conditions of maintenance include the procedures (3.170) and resources for use.
Note 3 to entry: Maintainability may be quantified using such measures as mean time to restoration, or the probability of restoration within a specified period of time.

938 *maintenance*

ISO 10795:2019 3.145 TC20/SC14/WG5

1199 combination of all technical and administrative actions (3.9) intended to retain an item (3.134) in, or restore it to, a state in which it can perform as required
Note 1 to entry: Maintenance includes management (3.146) and supervision activities for support.

939 *maintenance instruction*

MI **ISO 26870:2009** 3.10 TC20/SC14/WG3

1200 maintenance instruction
maintenance procedure

document containing detailed descriptions of the maintenance procedures that are required for a complex or main system

940 *maintenance procedure*

MI **ISO 26870:2009** 3.10 TC20/SC14/WG3

1201 maintenance instruction
maintenance procedure

document containing detailed descriptions of the maintenance procedures that are required for a complex or main system

941 *major characteristic*

ISO 19826:2017 3.4 TC20/SC14/WG5

1202 kind of characteristic whose fault would cause the end product fails to perform a required mission
Note 1 to entry: It would not cause failure of the whole system or major subsystems which perform a required mission.

942 *Management*

ISO 10795:2019 3.146 TC20/SC14/WG5

1203 coordinated activities to direct and control an organization (3.163)
Note 1 to entry: Management can include establishing policies and objectives, and processes (3.171) to achieve these objectives.
Note 2 to entry: The word “management” sometimes refers to people, i.e. a person or group of people with authority and responsibility for the conduct and control of an organization. When “management” is used in this sense, it should always be used with some form of qualifier to avoid confusion with the concept of “management” as a set of activities defined above. For example, “management shall…” is deprecated whereas “top management shall…” is acceptable. Otherwise different words should be adopted to convey the concept when related to people, e.g. managerial or managers.
[SOURCE: ISO 9000:2015, 3.3.3]

	ISO 18676:2017	3.1	TC20/SC14/WG5

1204 coordinated activities to direct and control an organization (3.2)
[SOURCE: ISO 9000:2015, 3.3.3]

943 *management approach*

	ISO 23462:2014	2.1	TC20/SC14/WG5

1205 consideration developed for management elements
Note 1 to entry: Management approaches are used in establishing the programme/project management franiework.

944 *management requirement*

	ISO 17255:2014	3.1.1	TC20/SC14/WG5

1206 formalized statement in the statement of work made exclusively to describe what to deliver and to specify the work to be performed, excluding the technical performance

945 *management system*

	ISO 10795:2019	3.147	TC20/SC14/WG5

1207 set of interrelated or interacting elements of an organization (3.163) to establish policies and objectives, and processes (3.171) to achieve those objectives
Note 1 to entry: A management system can address a single discipline or several disciplines, e.g. quality (3.188) management (3.146), financial management or environmental management.
Note 2 to entry: The management system elements establish the organization's structure, roles and responsibilities, planning, operation, policies, practices, rules, beliefs, objectives and processes to achieve those objectives.
Note 3 to entry: The scope of a management system can include the whole of the organization, specific and identified functions (3.110) of the organization, specific and identified sections of the organization, or one or more functions across a group of organizations.
Note 4 to entry: This constitutes one of the common terms and core definitions for ISO management system standards (3.228) given in Annex SL of the Consolidated ISO Supplement to the ISO/IEC Directives, Part 1. The original definition has been modified by modifying Notes 1 to 3 to entry.
[SOURCE: ISO 9000:2015, 3.5.3]

946 *Manned spacecraft*

MSC	**ISO 16157:2018**	3.4	TC20/SC14/WG6

1208 manned (habitable) spacecraft
spacecraft, spaceship, space station, Lunar or planetary base with pressurized components inside

MSC	**ISO 16726:2018**	3.4	TC20/SC14/WG6

1209 manned (habitable) spacecraft
spacecraft, spaceship, space station, Lunar or planetary which human base with pressurized components inside habitation environment is maintained [SOURCE: ISO 16157, 3.4]

947 *manufacturer*

	ISO 14621-1:2019	3.1.4	TC20/SC14/WG5

1210 company or organization that transfers raw material into a product

	ISO 14621-2:2019	3.1.2	TC20/SC14/WG5

1211 company or organization that transforms raw material into a product

948 manufacturer of modernized product item

	ISO 20892:2018	3.4	TC20/SC14/WG5

1212 organization that performs work on pre-production and production of the upgraded product item by working design documentation

949 manufacturing defect

	ISO 17540:2016	2.40 Engine defects 2.40.2	TC20/SC14/WG2

1213 engine defect caused by non-performance of the design documentation, non-fulfilment or non-performance of technological documentation requirements during its manufacturing and/or maintenance

950 manufacturing period

	ISO 17540:2016	2.45 Engine quality control 2.45.4	TC20/SC14/WG2

1214 calendar time of engine manufacturing, after it resumes manufacturing quality assurance, makes decision about manufacturing perfection and updating the control plan, determining the possibility of when the next manufacturing period begins, and issuing the reporting document

Note 1 to entry: The manufacturing period can also be determined by the number of engines produced.

951 margin of safety

MS	ISO 10786:2011	3.33	TC20/SC14/WG1

1215 measure of a structure's predicted reserve strength in excess of the design criteria
NOTE 1 For a single loading condition, MS is expressed as:
MS = { [Allowable Load (Yield or Ultimate)] / [Limit Load x Factor of Safety (Yield or Ultimate)]} -1
NOTE 2 Load may mean force, stress, or strain, if the load-stress relationship is linear.
NOTE 3 The relation also can be expressed for a combined loading case, when the load-stress relationship remains linear for all the contributors of the loading case. Also see alternative methods in Annex D.

MS	ISO 14623:2003	2.39	TC20/SC14/WG1

1216 margin expressed by the following equation:
MS = (Allowable load / (Limit load × Factor of safety)) - 1
NOTE Load can mean stress or strain.

Ms	**ISO 16454:2007**	3.21	TC20/SC14/WG1

1217 expression of the margin of the limit load multiplied by design safety factor against the allowed load
Another representation of the concept:
Ms=(Fal/(fds × Fll))-1
where
Fal is the allowable load under specified functional conditions (e.g. yield, rupture, collapse, local buckling);
Fll is the limit load;
fds is the design safety factor.
NOTE Load can imply corresponding stress or strain.

MS	**ISO 21648:2008**	2.1.26	TC20/SC14/WG1

1218 margin of safety expressed as (τ allow/(τ limit × k safe))-1
where
τ allow is the allowable load;
τ limit is the limit load;
k safe is the design safety factor
NOTE Load can mean stress or strain (see 2.1.3).

952 *mass and inertia properties*

	ISO 10786:2011	3.34	TC20/SC14/WG1

1219 mass and inertia properties of a structure comprise its mass, the location of its centre of gravity, its moments and products of inertia, and, where applicable, its balancing masses

953 *mass control parameters*

	ISO 22010:2007	3.7	TC20/SC14/WG1

1220 factors used as an indicator of the basic mass, predicted mass and margins/limits for a space system
See Figure 1 in standard.

954 *mass density*

	ISO 14200:2012	3.10	TC20/SC14/WG4

1221 mass per unit volume

955 *mass flow rate*

	ISO 17540:2016	2.7 General parameters and performance of engine 2.7.2	TC20/SC14/WG2

1222 mass of fluid passing a specified line or gate in unit time

956 *mass growth allowance*

	ISO 22010:2007	3.8	TC20/SC14/WG1

1223 predicted change to the basic mass of an item, based on an assessment of the design and fabrication status of the item and an estimate of the in-scope design changes that may still occur
NOTE 1 This mass growth allowance is not intended to be a tolerance.
NOTE 2 Figure 1 is an illustration of related terms commonly used in reporting mass properties during the development of space systems hardware.
(See figure 1 in text of standards)

957 *mass properties*

	ISO 22010:2007	3.9	TC20/SC14/WG1

1224 mass, centre of gravity, moments of inertia, and products of inertia

958 *mass properties categories*

	ISO 22010:2007	3.10	TC20/SC14/WG1

1225 criteria used to indicate the confidence in or maturity of the design

959 *material*

	ISO 10795:2019	3.148	TC20/SC14/WG5

1226 raw, semi-finished or finished purchased item (3.134) (gaseous, liquid, solid) of given characteristics (3.41) from which processing into a functional element of the product (3.173) is undertaken

960 *mathematical simulation*

	ISO 16781:2013	2.6	TC20/SC14/WG1

1227 kind of simulation, in which all the simulation models of control system are implemented by software

961 *mating plane*

	ISO 14303:2002	2.4	TC20/SC14/WG2

1228 interface between the spacecraft, or the spacecraft-provided payload adapter, and the launch vehicle

962 *mature technology*

	ISO 16290:2013	2.8	TC20/SC14/WG5

1229 technology defined by a set of reproducible processes (2.17) for the design, manufacture, test and operation of an element (2.4) for meeting a set of performance requirements(2.14) in the actual operational environment (2 .11)

963 *Maximum Allowable Concentration*

MAC	**ISO 16726:2018**	3.9	TC20/SC14/WG6

1230 safe concentration of toxic substance in the air at a given mission and duration for off-nominal conditions emergency situations
Note 1 to entry: This concentration determines an «acceptable risk» level

964 *maximum allowed working pressure*

MAWP **ISO 24638:2008** 3.17 TC20/SC14/WG1

1231 maximum differential pressure of a component designed to withstand safety and continue to operate normally when installed in any pressure system

965 *maximum and minimum predicted temperatures*

ISO 15864:2004 3.1.4 TC20/SC14/WG2

1232 highest and lowest temperatures that can be expected to occur during the entire life cycle of the subsystem/unit in all operational modes plus an uncertainty factor

966 *maximum design pressure*

MDP **ISO 14623:2003** 2.40 TC20/SC14/WG1

1233 highest pressure defined by maximum relief pressure, maximum regulator pressure, and/or maximum temperature, including transient pressures, at which a pressure vessel retains two-fault tolerance without failure
NOTE In this document, the term MDP is only applicable to pressure vessels.

MDP **ISO 21347:2005** 3.20 TC20/SC14/WG1

1234 highest pressure, as defined by maximum relief pressure, maximum regulator pressure and/or maximum temperature, including transient pressures, at which a pressure vessel retains two-fault tolerance without failure

MDP **ISO 24638:2008** 3.18 TC20/SC14/WG1

1235 highest differential pressure defined by maximum relief pressure, maximum regulator pressure and/or maximum temperature, including transient pressures, at which a pressurized hardware item retains two-fault tolerance without failure

967 *maximum design speed*

MDS **ISO 21648:2008** 2.1.28 TC20/SC14/WG1

1236 highest possible operating speed based on a combination of credible failures
NOTE Maximum design speed is required for some manned systems to accommodate any combination of two credible failures that will affect speed.

968 *maximum dynamic pressure phase*

ISO 15862:2009 2.5 TC20/SC14/WG2

1237 flight phase when dynamic pressure reaches its maximum value

969 *Maximum Expected Operating Pressure*

MEOP **ISO 10785:2011** 3.20 TC20/SC14/WG1

1238 highest differential pressure which a pressurized hardware item is expected to experience during its service life and retain its functionality, in association with its applicable operating environments
NOTE 1 MEOP includes the effects of temperature, transient peaks, relief pressures, regulator pressure, vehicle acceleration, phase changes, transient pressure excursions, and relief valve tolerance.
NOTE 2 Some projects may replace MEOP with m aximum design pressure (MDP), which takes into a ccount more conservative conditions.
NOTE 3 Adapted from ISO 14623:2003, definition 2.41.

MEOP	**ISO 10786:2011**	3.35	TC20/SC14/WG1

1239 highest differential pressure which a pressurized hardware item is expected to experience during its service life and retain its functionality, in association with its applicable operating environments
NOTE 1 MEOP includes the effects of temperature, transient peaks, relief pressures, regulator pressure, vehicle acceleration, phase changes, transient pressure excursions, and relief valve tolerance.
NOTE 2 Some particular project may replace MEOP by Maximum Design Pressure (MDP), which takes into account more conservative conditions.

MEOP	**ISO 14623:2003**	2.41	TC20/SC14/WG1

1240 highest differential pressure which a pressurized hardware item is expected to experience during its service life and retain its functionality, in association with its applicable operating environments

MEOP	**ISO 21347:2005**	3.21	TC20/SC14/WG1

1241 highest differential pressure which a pressurized hardware item is expected to experience during its service life and retain its functionality, in association with its applicable operating environments

MEOP	**ISO 24638:2008**	3.19	TC20/SC14/WG1

1242 highest differential pressure that a pressurized hardware item is expected to experience during its service life and yet retain its functionality, in association with its applicable operating environments
NOTE In this International Standard, the use of the term “maximum expected operating pressure (MEOP)” also signifies “maximum design pressure (MDP)”, “maximum operating pressure (MOP)” or “maximum allowed working pressure (MAWP)”, as appropriate, for a specific application or programme.

970 *maximum expected operating speed*

MEOS	**ISO 21648:2008**	2.1.27	TC20/SC14/WG1

1243 maximum spinning speed that a part in a flywheel module is expected to experience during its normal operation
NOTE Maximum expected operating speed is synonymous with limit speed.

971 *maximum operating pressure*

MOP	**ISO 24638:2008**	3.20	TC20/SC14/WG1

1244 maximum differential pressure at which the component or the pressure system actually operates in an application
NOTE MOP is synonymous with MEOP.

972 *maximum oxygen concentration*

MOC	**ISO/TS 16697:2012**	3.2	TC20/SC14/WG6

1245 highest oxygen concentration where all samples tested (at least five) pass the test criteria described in Clause 4

973 *maximum permissible concentration for single dose*

MPC SD	**ISO 16726:2018**	3.10	TC20/SC14/WG6

1246 concentration of toxic substance in the air in emergency situations for single dose and different duration, which guaranty human health maintenance

974 *maximum power*

Pmax **ISO 15387:2005** 3.18 TC20/SC14/WG1

1247 power at the point on the current-voltage characteristics where the product of current and voltage is a maximum at a particular temperature and irradiance
NOTE Pmax = Vmax × Imax

975 *maximum power current*

Ipmax **ISO 15387:2005** 3.20 TC20/SC14/WG1

1248 current corresponding to maximum power at a particular temperature and irradiance

976 *maximum power voltage*

Vpmax **ISO 15387:2005** 3.19 TC20/SC14/WG1

1249 voltage corresponding to maximum power at a particular temperature and irradiance

977 *Mean fluxes*

Mean *M* **ISO/TR 18147:2014** 2 TC20/SC14/WG4

1250 Mean fluxes (fluences or peak fluxes)
Fluxes, with probability 0,5 (50/50 case), or at the 0,5 confidence level.

978 *mean free path*

ISO 15856:2010 3.1.11 TC20/SC14/WG4

1251 average distance that a subatomic particle, ion, atom or molecule travels between successive collisions with ions, atoms or molecules

979 *mean sea level*

ISO/TR 11225:2012 3.2 TC20/SC14/WG4

1252 reference point for both geopotential and geometric altitudes

980 *mean time between failures*

MTBF **ISO 10795:2019** 3.149 TC20/SC14/WG5

1253 expected value of the operating time between failures (3.98)
Note 1 to entry: “Time” is generic and should be expressed in units appropriate to the item (3.134) concerned, e.g. calendar time, operating time, operating cycles (3.160), distance run, etc., and the units should always be clearly stated.
Note 2 to entry: The practice of replacing the “T” with “D” for distance, or “K” for kilometres, etc., is deprecated.

981 *mean time to restoration*

MTTR **ISO 16091:2018** 3.1.11 TC20/SC14/WG5

1254 DEPRECATED: mean time to repair
DEPRECATED: mean time to recovery
expectation of the time to restoration
[SOURCE: IEC 60050-192-07-23:1992]

982 *measured properties*

	ISO 22010:2007	3.11	TC20/SC14/WG1

1255 mass properties determined by measurement or by comparison of nearly identical components, for which measured mass properties are available

983 *measurement management system*

	ISO 10795:2019	3.150	TC20/SC14/WG5

1256 set of interrelated or interacting elements necessary to achieve metrological confirmation and control of measurement processes (3.171)
[SOURCE: ISO 9000:2015, 3.5.7]

984 *measurement point*

	ISO 19924:2017	3.9	TC20/SC14/WG2

1257 specific points spatially distributed in the sound field at which sound pressure levels (3.4) are measured during test

985 *measuring equipment*

	ISO 10795:2019	3.151	TC20/SC14/WG5

1258 measuring instrument, software (3.217), measurement standard (3.228), reference material (3.148) or auxiliary apparatus or combination thereof necessary to realize a measurement process (3.171)
[SOURCE: ISO 9000:2015, 3.11.6]

986 *mechanical damage*

	ISO 14623:2003	2.42	TC20/SC14/WG1

1259 induced flaw in the composite overwrap or metallic liner of a composite overwrapped pressure vessel, caused by surface abrasions or cuts or impact

	ISO 21347:2005	3.22	TC20/SC14/WG1

1260 induced flaw in the composite hardware item that is caused by surface abrasions, cuts or impacts

987 *mechanical damage control*

	ISO 21347:2005	3.23	TC20/SC14/WG1

1261 use of mechanical damage protection and/or indication system and appropriate inspection procedure to assure that no mechanical damage has been induced on a composite hardware item or if it has, the residual strength of the item still meets the minimum design ultimate load/pressure requirements for the required life

988 *mechanical impurity*

	ISO 15860:2006	3.1.1	TC20/SC14/WG3

1262 solid dispersal phase with a wide spectrum of aerosol particle size

989 *mechanical linkage section*

	ISO 10785:2011	3.21	TC20/SC14/WG1

1263 section within bellows assembly that will serve as the bellows restraint for thrust force by pressure, deflection, or other factors

990 *mechanical part*

ISO 10794:2018	3.4	TC20/SC14/WG5

1264 piece of hardware that is not electrical, electronic or electromechanical and that performs a simple elementary function or part of a function in such a way that it can be evaluated as a whole against expected requirements of performance and cannot be disassembled without destroying this capability

ISO 10795:2019	3.152	TC20/SC14/WG5

1265 piece of hardware (3.119) that is not electrical, electronic or electromechanical and that performs a simple elementary function (3.110) or part of a function in such a way that it can be evaluated as a whole against expected performance (3.166) requirements (3.201) and cannot be disassembled without destroying this capability
Note 1 to entry: Only standard parts are subject to the mechanical parts lists; non-standard parts are described through their materials (3.148).
[SOURCE: ISO 10794:2018, 3.4, modified – Note 1 to entry has been added.]

991 *mechanisms of space environment effects on materials*

ISO 17851:2016	3.5 Terms related to physical and chemical mechanisms of space environment effects on materials 3.5.1	TC20/SC14/WG4

1266 totality of physical and chemical phenomena causing the changes in material properties under the influence of primary and secondary space environment factors
- evaporation, sputtering, surface erosion
- surface contamination
- charge accumulation on the surface (surface charging)
- charge accumulation in the volume of dielectrics (bulk charging)
- formation of structural radiation defects

992 *Memory*

ISO 14950:2004	3.2.9	TC20/SC14/WG3

1267 any on-board memory area, whether main memory or storage memory, such as disk, tape, or bubble-memory

993 *Metadata*

ISO 10789:2011	3.3	TC20/SC14/WG5

1268 structured, encoded data that describe characteristics of information-bearing entities to aid in the identification, discovery, assessment, and management of the described entities

994 *metallic hardware items*

ISO 14623:2003	2.44	TC20/SC14/WG1

1269 hardware items made of metallic materials
NOTE In this document, the term covers metallic pressure vessels, metallic pressurized structures and metallic liners of composite overwrapped pressure vessels.

995 *metallic structural item*

	ISO 10786:2011	3.36	TC20/SC14/WG1

1270 structural item made of metals
NOTE In this document, load bearing metallic liners of COPVs are also referred to as metallic structural items.

996 *metal-lined composite overwrapped pressure vessel*

	ISO 14623:2003	2.43	TC20/SC14/WG1

1271 composite overwrapped pressure vessel having a metallic liner
NOTE Throughout this document, the term "composite overwrapped pressure vessel" means metal-lined composite overwrapped pressure vessel.

997 *metal-lined COPV*

	ISO 21347:2005	3.24	TC20/SC14/WG1

1272 composite-overwrapped pressure vessel which has a metallic liner

998 *meteorid*

	ISO 14200:2012	3.12	TC20/SC14/WG4

1273 debris environment model
space debris environmental model
tool that simulates realistic description of the meteoroid and debris environment of Earth, and performs risk assessment via flux predictions on user defined target orbit

999 *meteorid environment model*

	ISO 14200:2012	3.12	TC20/SC14/WG4

1274 meteorid / (space) debris environment(al) model

tool that simulates realistic description of the meteoroid and debris environment of Earth, and performs risk assessment via flux predictions on user defined target orbit

1000 *meteorid environmental model*

	ISO 14200:2012	3.12	TC20/SC14/WG4

1275 meteorid / (space) debris environment(al) model

tool that simulates realistic description of the meteoroid and debris environment of Earth, and performs risk assessment via flux predictions on user defined target orbit

1001 *meteoroid*

	ISO 11227:2012	3.1.8	TC20/SC14/WG7

1276 particles of natural origin, resulting from the disintegration and fragmentation of comets and asteroids, which orbit the sun

	ISO 14200:2012	3.11	TC20/SC14/WG4

1277 particles of natural origin that result from the disintegration and fragmentation of comets and asteroids which orbit round the sun

1002 *microorganism*

	ISO 15388:2012	3.1.28	TC20/SC14/WG6

1278 microscopical individual constituted to carry out life functions microscopical individual constituted to carry out life functions
NOTE 1 Microorganisms include organisms such as bacteria, protozoa, yeasts, moulds, fungi, algae and organisms that depend upon other life forms for reproduction such as viruses and parasites.
NOTE 2 Multicellular organisms and agglomerations of microorganisms may be visible to the unaided eye.

1003 *microscopical*

	ISO 15388:2012	3.1.29	TC20/SC14/WG6

1279 visible only under a microscope

1004 *mid-Earth orbits*

	ISO 17851:2016	3.2 Terms related to orbits 3.2.3	TC20/SC14/WG4

1280 intermediate circular orbits with an altitude h = 2 000 km to 36 000 km:
— GPS orbit h = 20 200 km, inclination (i) = 55°
— GLONASS orbit h = 19 100 km, i = 64,8°
— GALILEO orbit h = 23 222 km, i = 56°
— BeiDou orbit h = 21 528 km, I = 55°

1005 *milestone*

	ISO 10795:2019	3.153	TC20/SC14/WG5

1281 designated project (3.178) status that indicates the amount of progress made toward project completion, or that should be achieved before the project proceeds to a new phase
[SOURCE: ISO 21349:2007, 3.2]

	ISO 21349:2007	3.2	TC20/SC14/WG5

1282 designated project status that indicates the amount of progress made toward project completion, or that should be achieved before the project proceeds to a new phase

	ISO 22137:2020	3.1.1	TC20/SC14/WG5

1283 designated project status that indicates the amount of progress made toward project completion, or that should be achieved before the project proceeds to a new phase
[SOURCE: ISO 21349:2007, 3.2]

1006 *milestone criteria*

	ISO 21349:2007	3.3	TC20/SC14/WG5

1284 observable facts that indicate a milestone has been reached

	ISO 22137:2020	3.1.2	TC20/SC14/WG5

1285 observable facts that indicate a milestone has been reached
[SOURCE: ISO 21349:2007, 3.3]

1007 *minimum allowable*

	ISO 16454:2007	3.22	TC20/SC14/WG1

1286 minimum material mechanical properties warranted by the supplier

1008 *minimum sampling frequency*

	ISO 15862:2009	2.6	TC20/SC14/WG2

1287 minimum number of data points of measurement fields collected per second

1009 *minor characteristic*

	ISO 19826:2017	3.5	TC20/SC14/WG5

1288 kind of characteristic significant to product quality, but whose fault could not affect realization of mission performance of product

1010 *mishap*

	ISO 10795:2019	3.8	TC20/SC14/WG5

1289 accident
mishap

undesired event arising from operation of any project (3.178)-specific items (3.134) which results in:
a) human death or injury;
b) loss of, or damage to, hardware (3.119), software (3.217) or facilities which could then affect the accomplishment of the mission (3.154);
c) loss of, or damage to, public or private property; or
d) detrimental effects on the environment (3.92)
[SOURCE: ISO 14620-1:2018, 3.1.1, modified – The term "mishap" has been added as an alternative.]

	ISO 17689:2015	2.11	TC20/SC14/WG2

1290 mishap
accident
unplanned event or series of events resulting in damage or potential for damage
Note 1 to entry: While sometimes used synonymously, an "accident" generally means a severe type of "mishap".
[SOURCE: ISO 14620-2:2011, 3.20]

1011 *mission*

	ISO 10795:2019	3.154	TC20/SC14/WG5

1291 set of tasks, duties or functions (3.110) to be accomplished by an element
[SOURCE: EN 16601-00-01:2015, 2.3.139]

	ISO 24113:2019	3.15	TC20/SC14/WG7

1292 set of tasks or functions to be accomplished by a spacecraft (3.25) or launch vehicle orbital stage (3.13), other than its disposal (3.5)

1012 *mission analysis*

	ISO 16091:2018	3.1.12	TC20/SC14/WG5

1293 assessment of the mission as a result of the project with exploration of concepts conforming to expressed objectives to be reached, such as performance, cost, and schedule

1013 *mission data system*

	ISO 14711:2003	2.1	TC20/SC14/WG3

1294 hardware and software located both on the space platform and in the ground support systems that provide the transport mechanisms for mission data together with the information system that properly configures and controls this hardware and software

1014 *Mission duration*

T	**ISO/TR 18147:2014**	2	TC20/SC14/WG4

1295 Calendar time period for the SEP peak flux or fluence is model calculated (months).

1015 *mission lifetime extension*

	ISO 24113:2019	3.16	TC20/SC14/WG7

1296 postponement of the previously defined end of mission (3.10)

1016 *mission limit*

	ISO 22010:2007	3.12	TC20/SC14/WG1

1297 maximum mass that can satisfy all of the mission performance requirements

1017 *mission management*

	ISO 14950:2004	3.2.10	TC20/SC14/WG3

1298 on-board functionality that allows a mission to undertake routine operations highly autonomously with the minimum of ground intervention

1018 *mission manager*

	ISO 14950:2004	3.2.11	TC20/SC14/WG3

1299 on-board function that supervises (or performs) the system-level mission management activities
NOTE 1 Future autonomy concepts foresee a distributed on-board “control authority” that is able to manage functions at both system-level and subsystem-level.
NOTE 2 Within this concept, the mission manager supervises the execution of high-level instructions from the ground expressed as mission goals.
NOTE 3 The mission manager performs all the system-level functions, while subsystem (and payload) managers perform the subsystem-level functions.

1019 *mission operations*

	ISO 16290:2013	2.9	TC20/SC14/WG5

1300 sequence of events that are defined for accomplishing the mission

1020 *mission operations concept*

	ISO 14711:2003	2.2	TC20/SC14/WG3

1301 description, in operator and user terms, of the operational attributes of a mission’s flight and ground elements

1021 *mission operations system*

MOS	**ISO 14711:2003**	2.3	TC20/SC14/WG3

1302 system consisting of mission data system and the operations organization

1022 *Mission parameter*

n	**ISO/TR 18147:2014**	2	TC20/SC14/WG4

1303 The parameter of the model, relative determined as the hypothetic mean number of SEP events with the fluences F30 ≥ 10 5 cm−2 protons
with energy ≥30 MeV expected during the missions duration.

1023 *Mission Phase*

	ISO 27852:2016	3.1.6	TC20/SC14/WG3

1304 period of a mission during which specified communication characteristics are fixed.
Note 1 to entry: The transition between two consecutive mission phases may cause an interruption on the communications services.

1024 *mission segment*

	ISO 23041:2018	3.4	TC20/SC14/WG3

1305 ground system that consists of the facilities of ission data acquisition and processing

1025 *mission statement*

	ISO 17255:2014	3.1.2	TC20/SC14/WG5

1306 document expressing the set of collected needs
Note 1 to entry: The mission statement is a document established by the customer, which reflects the users needs, and is used as input to all phases of a space system project.

1026 *mixing system*

	ISO 17540:2016	2.12 Chamber (gas generator) components 2.12.3, 2.12.4	TC20/SC14/WG2

1307 <for chamber> part of the chamber (2.2.1) representing the device for propellant components and/or gas generation products input into the combustion chamber (2.12.1) and their initial mixing

<for gas generator> part of the gas generator (2.2.4) representing the device for propellant components input into the combustion chamber (2.12.2) and their initial mixing

1027 *mixing system bottom*

ISO 17540:2016	2.12 Chamber (gas generator) components 2.12.5, 12.2.6	TC20/SC14/WG2

1308 <for chamber> item of the engine chamber mixing system, dividing cavities of propellant components or gas generation products among themselves, or separating them from fire space and the external environment

<for gas generator> item of the gas generator mixing system, dividing cavities of propellant components among themselves, or separating them from fire space and external environment
Note 1 to entry: Distinguish the external, average and internal bottoms.
Note 2 to entry: External bottom function in the engine chamber, with reburning, can perform gas passage.

1028 *mixing system impedance*

ISO 17540:2016	2.14 Operating process in chamber (gas generator) 2.14.17	TC20/SC14/WG2

1309 complex value in which the module is the ratio of pressure oscillations amplitude to the speed at the chamber (gas generator) mixing system and the phase is the displacement between pressure (2.7.8) and speed oscillations

1029 *mixture generation*

ISO 17540:2016	2.14 Operating process in chamber (gas generator) 2.14.3, 12.14.4	TC20/SC14/WG2

1310 <in chamber> dispersion and mixing of propellant components or gas generation products

<in gas generator> dispersion and mixing of propellant components

1030 *Mixture Ratio*

ISO 17540:2016	2.7 General parameters and performance of engine 2.7.5	TC20/SC14/WG2

1311 ratio of oxidizer mass flow rate (2.7.2) to the fuel mass flow rate

1031 *model*

ISO 10795:2019	3.155	TC20/SC14/WG5

1312 physical or abstract representation of relevant aspects of an item (3.134) or process (3.171) that is put forward as a basis for calculations, predictions, or further assessment (3.24)
Note 1 to entry: The term “model” can also be used to identify particular instances of the product (3.173), e.g. flight model.

	ISO 16290:2013	2.10	TC20/SC14/WG5

1313 physical or abstract representation of relevant aspects of an element (2.4) that is put forward as a basis for calculations, predictions, tests or further assessment
Note 1 to entry: The term “model” can also be used to identify particular instances of the element, e.g. flight model.
Note 2 to entry: Adapted from ISO 10795, definition 1.141.

1032 *model test*

	ISO 17540:2016	2.34 Types of engine tests: Test purposes 2.34.6	TC20/SC14/WG2

1314 produced engines check tests for the purpose of assessing the effectiveness and appropriateness of changes made in the product design or manufacturing process

1033 *modification*

	ISO 10795:2019	3.156	TC20/SC14/WG5

1315 scheduled replacement of an item (3.134) with an item of a different configuration (3.50) (new or modified)
Note 1 to entry: This type of maintenance (3.145) is accomplished during transfer periods for mission (3.154) and safety (3.210) items.

	ISO 18322:2017	3.2	TC20/SC14/WG2

1316 change in the configuration of an existing test facility
Note 1 to entry: In the context of a test facility.

1034 *module*

	ISO 15387:2005	3.21	TC20/SC14/WG1

1317 assembly of interconnected solar cells

1035 *molecular contamination*

	ISO 15388:2012	3.1.30	TC20/SC14/WG6

1318 contamination due to deposition of molecules on surfaces or their presence in gases or liquids

1036 *moving mechanical assembly*

MMA	**ISO 10786:2011**	3.37	TC20/SC14/WG1

1319 mechanical or electromechanical device that controls the movement of one mechanical part of a vehicle relative to another part
EXAMPLES Gimbals, actuators, despin and separation mechanisms, motors, latches, clutch springs, dampers, or bearings.

1037 *multimode engine*

	ISO 17540:2016	2.3 Engine types by way of work process 2.3.4	TC20/SC14/WG2

1320 engine with several basic modes

1038 *multiphase flow*

ISO 17540:2016	2.19 Flow in nozzle 2.19.4	TC20/SC14/WG2

1321 flow in the nozzle (2.12.16) characterized by the availability of gaseous, liquid and solid phases of combustion products

1039 *multipoint control*

ISO 19924:2017	3.11	TC20/SC14/WG2

1322 control achieved by using the average of the signals at the control points (3.10)

1040 *multi-seated test stand*

ISO 17540:2016	2.48 Stand types 2.48.4	TC20/SC14/WG2

1323 engine test stand (2.47.1) with a number of work stations (2.47.7) that enable the testing of two or more engines or their units in a specified sequence

1041 *multi-start engine*

ISO 17540:2016	2.4 Engine types by multiplicity of use and integration 2.4.4	TC20/SC14/WG2

1324 multi-start engine
restartable engine
engine started multiple times for one specific purpose

1042 *multizone gas generator*

ISO 17540:2016	2.13 Gas generator types 2.13.2	TC20/SC14/WG2

1325 gas generator (2.2.4) where some phases of the operating process are provided with items of the mixture generation constructional units placed on the internal bottom of mixing system (2.12.4)

1043 *national regulations*

ISO 20892:2018	3.9	TC20/SC14/WG5

1326 set of official state laws, including the constitution, laws, decrees, administrative orders, codes of practice and regulations, instructions, etc.

1044 *national regulatory laws*

ISO 14620-2:2019	3.14	TC20/SC14/WG5

1327 set of official statutes of a country
Note 1 to entry: The official statutes include constitution, law, decree, administrative order, code, regulation, etc.

1045 *natural space environment*

	ISO 15856:2010	3.1.12	TC20/SC14/WG4

1328 environment that exists in space without a spacecraft system present
NOTE This includes radiation, vacuum, residual atmosphere, plasmas, magnetic fields and meteoroids.

1046 *Naval Research Labatory Mass Spectrometer, Incoherent Scatter Radar Extended Model*

NRLMSISE-00	**ISO 14222:2013**	2.5	TC20/SC14/WG4

1329 model that describes the neutral temperature and species densities in Earth' s atmosphere
Note 1 to entry: It is based on a very large underlying set of supporting data from satellites, rockets, and radars, with extensive temporal and spatial distribution. It has been extensively tested against experimental data by the international scientific community. The model has a flexible mathematical formulation.
Note 2 to entry: It is valid for use from ground level to the exosphere. Two indices are used in this model: F107 (both the daily solar flux value of the previous day and the 81-day average centred on the input day) and Ap (geomagnetic daily value).

Note 3 to entry: See Reference [1] in standard

1047 *near ultraviolet radiation*

NUV radiation	**ISO 15856:2010**	3.1.13	TC20/SC14/WG4

1330 solar electromagnetic radiation with a wavelength in the range of 300 nm to 400 nm

1048 *near-Earth space*

	ISO 17851:2016	3.1 Terms related to regions in space 3.1.1	TC20/SC14/WG4

1331 region of space limited by sphere with radius equal to the average distance from the Moon to the Earth (380 000 km)

1049 *near-normal-hemispherical*

	ISO 16378:2013	3.7	TC20/SC14/WG6

1332 indicates irradiance to be directional near-normal to the specimen surface and the flux leaving the surface or medium is collected over an entire hemisphere for detection

1050 *need*

	ISO 21351:2005	3.1.9	TC20/SC14/WG5

1333 what is necessary for, or desired by, the user
NOTE 1 A need can be declared or undeclared; it can be an existing or a potential one.
NOTE 2 The user is a person or an organization for which the product is designed and which exploits at least one of its functions at any time during its life cycle.
NOTE 3 For the space community, the needs are often called mission statement.
NOTE 4 Adapted from EN 1325-1.

1051 *net positive suction head*

NPSH	**ISO 17540:2016**	2.21 Pump characteristi cs 2.21.5	TC20/SC14/WG2

1334 head (2.21.1) corresponding to the difference between the pump inlet pressure and the vapour pressure and the density of fluid and the gravitational acceleration

1052 neutralization system

	ISO 17540:2016	2.49 Stand systems 2.49.7	TC20/SC14/WG2

1335 stand system (2.47.5) that prevents the arbitrary emission of toxic gas discharges into the atmosphere and neutralizes them under special conditions

1053 neutralization system of industrial waste water

	ISO 17540:2016	2.50 Post-test processing 2.50.1	TC20/SC14/WG2

1336 system intended for the neutralization of water contaminated by propellant components

1054 nipple

	ISO 15389:2001	3.11 (Amendment 1)	TC20/SC14/WG3

1337 half of a hydraulic or gas coupling with an external sealing surface

1055 no ground contact

	ISO 14950:2004	3.2.12	TC20/SC14/WG3

1338 period of time during a mission when ground contact is not possible due to the unavailability of the telecommand/telemetry links
NOTE The reasons for this unavailability can include:
a) predictable events such as:
1) non-permanent visibility due to spacecraft orbit characteristics combined with radio frequency coverage of telemetry and telecommand links;
2) time-shared access to the spacecraft;
b) unpredictable events such as:
1) spacecraft attitude depointing;
2) on-board failure of the telemetry and telecommand links;
3) ground station failure/unavailability;
4) link budget degradation.

1056 no-fire level

	ISO 26871:2012	3.1.27	TC20/SC14/WG1

1339 maximal level of input energy with an ignition stimulus (including nominal rise time and shape as required by the system, but with a 5 min extended duration), to a first element (initiator) at which initiation will not occur within a specific reliability and confidence level as determined by test and analysis
NOTE 1 It is recommended that the test sequence be carried out at the hottest temperature of the operating range.
NOTE 2 The probability of functioning should be less than or equal to 0,001 at the 95 % confidence level.
NOTE 3 A first element tested at this level shall remain safe and functional and shall guarantee the level of performances required after the no-fire level test.

1057 noise protection system

ISO 17540:2016 2.49 Stand systems 2.49.12 TC20/SC14/WG2

1340 stand system (2.47.5) that prevents the spread of noise from the running rocket engine (2.1.1)

1058 *nominal lifetime*

ISO 14622:2000 2.11.2 TC20/SC14/WG1

1341 most probable lifetime determined by the authority on the basis of the envelope lifetime

1059 *non-conformance*

ISO 10795:2019 3.157 TC20/SC14/WG5

1342 nonconformity
non-conformance

non-fulfilment of a requirement (3.201)
Note 1 to entry: This constitutes one of the common terms and core definitions for ISO management system (3.147) standards (3.228) given in Annex SL of the Consolidated ISO Supplement to the ISO/IEC Directives, Part 1.
[SOURCE: ISO 9000:2015, 3.6.9, modified – The term "non-conformance" has been added as an alternative.]

1060 *nonconformity*

ISO 10795:2019 3.157 TC20/SC14/WG5

1343 nonconformity
non-conformance

non-fulfilment of a requirement (3.201)
Note 1 to entry: This constitutes one of the common terms and core definitions for ISO management system (3.147) standards (3.228) given in Annex SL of the Consolidated ISO Supplement to the ISO/IEC Directives, Part 1.
[SOURCE: ISO 9000:2015, 3.6.9, modified – The term "non-conformance" has been added as an alternative.]

1061 *non-destructive evaluation*

NDE **ISO 21347:2005** 3.25 TC20/SC14/WG1

1344 non-destructive evaluation
non-destructive examination
process or procedure for determining the quality or characteristics of a material, part, or assembly without permanently altering the subject or its properties
NOTE For the purposes of this International Standard, this term is synonymous with non-destructive inspection (NDI), and non-destructive testing (NDT).

NDE **ISO 21648:2008** 2.1.29 TC20/SC14/WG1

1345 process or procedure for determining the quality or characteristics of a material, part or assembly without permanently altering the subject or its properties
NOTE In this International Standard, non-destructive evaluation is synonymous with non-destructive inspection (NDI) and non-destructive testing (NDT).

1062 *non-destructive examination*

NDE	**ISO 21347:2005**	3.25	TC20/SC14/WG1

1346 non-destructive evaluation
non-destructive examination
process or procedure for determining the quality or characteristics of a material, part, or assembly without permanently altering the subject or its properties
NOTE For the purposes of this International Standard, this term is synonymous with non-destructive inspection (NDI), and non-destructive testing (NDT).

1063 *non-equilibrium flow*

	ISO 17540:2016	2.19 Flow in nozzle 2.19.2	TC20/SC14/WG2

1347 flow in the nozzle (2.12.16) where there are no complied power, chemical and phase balance of combustion products or no presence of at least one of these kinds of balances

1064 *nonexpendable engine*

	ISO 17540:2016	2.4 Engine types by multiplicity of use and integration 2.4.2	TC20/SC14/WG2

1348 engine intended for a specific purpose and used multiple times

1065 *non-ionizing energy loss*

NIEL	**ISO 21980:2020**	3.15	TC20/SC14/WG4

1349 damage not caused by ionization of the incidence particles

1066 *non-metallic material*

	ISO 22538-4:2007	3.5	TC20/SC14/WG6

1350 any material other than a metal, or any composite in which the metal is not the most easily ignited component and for which the individual constituents cannot be evaluated independently

1067 *non-operable state*

	ISO 17540:2016	2.39 Engine reliability 2.39.3	TC20/SC14/WG2

1351 engine state when it is not able to fulfil at least one of the requirements providing in an operable state (2.39.2)

1068 *non-sustained arc*

	ISO 11221:2011	2.14	TC20/SC14/WG4

1352 passage of current from an external source through a conductive path that lasts only while the primary discharge current flows
See Figure 1 in standard.

1069 *nonvolatile residue*

NVR | **ISO 14952-1:2003** | 2.17 | TC20/SC14/WG6

1353 soluble or suspended material and insoluble particulate matter remaining after temperature-controlled evaporation of a filtered, volatile liquid

1070 *non-volatile residue*

NVR | **ISO 15388:2012** | 3.1.31 | TC20/SC14/WG6

1354 quantity of soluble or suspended residual material and insoluble particulate matter remaining after temperature-controlled evaporation of a filtered, volatile liquid
NOTE Adapted from ISO 14952-1:2003, 2.17.

1071 *normal operations*

ISO 24113:2019 | 3.17 | TC20/SC14/WG7

1355 execution of the planned tasks or functions for which a spacecraft (3.25) or launch vehicle orbital stage (3.13) was designed
Note 1 to entry: Normal operations include the disposal phase (3.7).

1072 *normal potential gradient*

ISO 11221:2011 | 2.15 | TC20/SC14/WG4

1356 normal potential gradient (preferred term)
normal voltage gradient (admitted term)

result of differential charging where the insulating surface or dielectric reaches a negative potential with respect to the neighbouring conducting surface or metal
NOTE This phenomenon is also known as NDPM (negative dielectric positive metal).

ISO 19923:2017 | 3.4 | TC20/SC14/WG4

1357 result of differential charging where the insulating surface or dielectric reaches a negative potential with respect to the neighbouring conducting surface or metal: NDPM (negative dielectric positive metal)

1073 *normal voltage gradient*

ISO 11221:2011 | 2.15 | TC20/SC14/WG4

1358 normal potential gradient (preferred term)
normal voltage gradient (admitted term)

result of differential charging where the insulating surface or dielectric reaches a negative potential with respect to the neighbouring conducting surface or metal
NOTE This phenomenon is also known as NDPM (negative dielectric positive metal).

1074 *normative document*

ISO 10795:2019 | 3.158 | TC20/SC14/WG5

1359 document (3.88) that provides rules, guidelines or characteristics (3.41) for activities or their results
Note 1 to entry: The term “normative document” is a generic term that covers such documents as standards (3.228), technical specifications (3.238), codes of practice and regulations.
Note 2 to entry: A “document” is to be understood as any medium with information recorded on or in it.
Note 3 to entry: The terms for different kinds of normative documents are defined considering the document and its content as a single entity.
[SOURCE: ISO/IEC Guide 2:2004, 3.1]

1075 normative documentation

	ISO 16159:2012	2.11	TC20/SC14/WG3

1360 specifications, standards, rules or instructions, to which adherence is required through citation in the design documentation or the construction, fabrication, manufacture, purchase or production documentation for the manufacture and operation of the facility, system or equipment

1076 nozzle

	ISO 17540:2016	2.12 Chamber (gas generator) components 2.12.16	TC20/SC14/WG2

1361 part of the engine that converts the thermal energy of the combustion gases into the kinetic energy of the exhaust plume
Note 1 to entry: The engine nozzle may be stationary and rotational, relative to the stationary parts of the chamber (2.2.1), and also have a rotational section for performance control.

1077 nozzle altitude

	ISO 17540:2016	2.18 Nozzle operation modes 2.18.4	TC20/SC14/WG2

1362 height above sea level where nozzle operating mode is rated in standard atmospheric conditions
Note 1 to entry: Instead of height above sea level, the height may be the applicable environment pressure corresponding to it.

1078 nozzle coefficient

	ISO 17540:2016	2.7 General parameters and performance of engine 2.7.25	TC20/SC14/WG2

1363 ratio of the actual thrust coefficient in a vacuum to the ideal that defined the same values of the mixture ratio (2.7.5) and combustion pressure in the chamber (2.2.1) and the geometric expansion ratio nozzle

1079 nozzle contour

	ISO 17540:2016	2.16 Nozzle items 2.16.1	TC20/SC14/WG2

1364 intercepting line of the nozzle surface with the plane passing through central axis

1080 nozzle contour with corner point

	ISO 17540:2016	2.16 Nozzle items 2.16.5	TC20/SC14/WG2

1365 nozzle contour (2.16.1) that has a break (turn)

1081 nozzle contour with uniform characteristic

	ISO 17540:2016	2.16 Nozzle items 2.16.3	TC20/SC14/WG2

1366 shaped nozzle contour (2.16.1) whose expanding part provides parallel flow at the nozzle exit section (2.16.10) with constant speed at any point of the section

1082 *nozzle critical section*

	ISO 17540:2016	2.16 Nozzle items 2.16.9	TC20/SC14/WG2

1367 nozzle flow section where combustion product speed is equal to the local sound speed

1083 *nozzle exit section*

	ISO 17540:2016	2.16 Nozzle items 2.16.10	TC20/SC14/WG2

1368 end of nozzle (2.12.16) of the divergent, bell-shaped part of a rocket exhaust nozzle that converts the thermal energy of the combustion gases to the kinetic energy of the exhaust plume and controls the expansion of the plume

Note 1 to entry: The nozzle exit section is perpendicular to the central axis and passes through endpoint of the nozzle contour (2.16.1).

Note 2 to entry: The exit section for a ring nozzle (2.15.5) is passed through endpoints of nozzle contour external site, while the exit section for a nozzle with an end cut is through the endpoint of the shortest contour.

1084 *nozzle exit section contour*

	ISO 17540:2016	2.16 Nozzle items 2.16.6	TC20/SC14/WG2

1369 closed line drawn through exit endpoints of all nozzle contours (2.16.1)

1085 *nozzle growing part*

	ISO 17540:2016	2.16 Nozzle items 2.16.12	TC20/SC14/WG2

1370 part of the nozzle (2.12.16) between the nozzle throat section (2.16.8) and the nozzle exit section (2.16.10)

1086 *nozzle impedance*

	ISO 17540:2016	2.14 Operating process in chamber (gas generator) 2.14.16	TC20/SC14/WG2

1371 complex value in which the module is the ratio of pressure oscillations amplitude to the speed in the nozzle's initial section and the phase is the displacement between pressure (2.7.7) and speed oscillations

1087 *nozzle inlet section*

	ISO 17540:2016	2.16 Nozzle items 2.16.7	TC20/SC14/WG2

1372 engine chamber flow section behind where the sharp reduction of flow section area begins

1088 *nozzle tapering part*

ISO 17540:2016	2.16 Nozzle items 2.16.11	TC20/SC14/WG2

1373 part of the nozzle (2.12.16) between the nozzle inlet section (2.16.7) and the nozzle throat section (2.16.8)

1089 *nozzle throat section*

ISO 17540:2016	2.16 Nozzle items 2.16.8	TC20/SC14/WG2

1374 nozzle flow section with minimum area

1090 *nozzle with external expansion*

ISO 17540:2016	2.15 Nozzle types 2.15.6	TC20/SC14/WG2

1375 pin nozzle
ring nozzle (2.15.5) in which the external zone is almost or completely absent at the expanding part contour

1091 *nozzle with internal expansion*

ISO 17540:2016	2.15 Nozzle types 2.15.7	TC20/SC14/WG2

1376 disk nozzle
ring nozzle (2.15.5) in which the internal zone is almost or completely absent at the expanding part contour

1092 *nozzle with oblique cut*

ISO 17540:2016	2.15 Nozzle types 2.15.9	TC20/SC14/WG2

1377 nozzle (2.12.16) whose cut is inclined to nozzle axis, different from right angle
Note 1 to entry: A nozzle with an oblique cut consists of a major axisymmetric part and small non- axisymmetric part.

1093 *n-year fluence*

ISO 12208:2015	2.5	TC20/SC14/WG4

1378 fluence during a mission of n years duration

1094 *objective evidence*

ISO 17566:2011	2.3	TC20/SC14/WG2

1379 data supporting the existence or verity of something

1095 *observability*

ISO 14950:2004	3.1.5	TC20/SC14/WG3

1380 ability to acquire operationally significant information for physical and logical parameters on-board the spacecraft
NOTE 1 This information is delivered to the ground through the telemetry channel and/or made available to on-board processors.
NOTE 2 The definition of observable parameters is a key requirement for operating spacecraft, monitoring the behaviour of all on-board systems, performing diagnosis of anomalies, and collecting sufficient information for feedback into ground-based models.

1096 *occupancy states of cleanrooms*

	ISO 15388:2012	3.1.32	TC20/SC14/WG6

1381 3.1.32.1
as-built
condition whereby the installation is complete with all services connected and functioning but with no equipment, materials, or personnel present
3.1.32.2
at-rest
condition whereby the installation is complete with equipment installed, and operating in a manner agreed between the customer and supplier, but with no personnel present
3.1.32.3
operational
condition whereby the installation is functioning in the specified manner, with the specified number of personnel present and working in the manner agreed upon

1097 *octave*

1/1 Oct	**ISO 19924:2017**	3.12	TC20/SC14/WG2

1382 interval between two centre frequencies (3.7) which have a ratio equal to 2

1098 *offgassed product*

	ISO 14624-3:2005	3.2	TC20/SC14/WG6

1383 organic or inorganic compound evolved as a gas from a material or assembled article

1099 *offgassing*

	ISO 14624-3:2005	3.3	TC20/SC14/WG6

1384 evolution of gaseous products from a liquid or solid material into an atmosphere

	ISO 15388:2012	3.1.33	TC20/SC14/WG6

1385 evolution of gaseous products from a liquid or solid material into an atmosphere
NOTE This is a special definition of outgassing (see 3.1.34) for the application described in ISO 14624-3.

1100 *off-line test*

	ISO 17540:2016	2.29 Types of engine tests: Associate with rocket 2.29.2	TC20/SC14/WG2

1386 independent test
engine test (2.27.1) outside a propulsion system

1101 *off-the-shelf*

OTS	**ISO 10795:2019**	3.159	TC20/SC14/WG5

1387 existing item (3.134) that has been developed for a specific application and is intended for use in another application
[SOURCE: ISO 21350:2007, 3.6]

OTS **ISO 21350:2007** 3.6 TC20/SC14/WG5

1388 existing item which has been developed for a specific application and is intended to be used in another application

1102 *off-time*

ISO 17540:2016 2.9 Low-thrust engine performance 2.9.10 TC20/SC14/WG2

1389 pause between inclusions
time interval from the moment of the thruster electric valve reenergizing up to the moment of the next voltage being applied

1103 *oil impurity*

ISO 15860:2006 3.1.2 TC20/SC14/WG3

1390 oil contained in gas in the form of vapours and aerosols

1104 *omnidirectional flux*

ISO 23038:2018 3.7 TC20/SC14/WG1

1391 number of particles of a particular type which have an isotropic distribution over 4π steradians and
that would traverse a test sphere of 1 cm² cross-sectional area in 1 s
Note 1 to entry: Expressed in units of particles per cm² per second.

1105 *on-board fault management*

ISO 14950:2004 3.2.13 TC20/SC14/WG3

1392 on-board functionality that allows the detection and management of on-board failures without ground intervention
NOTE 1 The primary objective of on-board fault management is to ensure the survival of the spacecraft.
NOTE 2 Where possible without hazard to the spacecraft, and within the mission constraints, on-board fault management shall maintain payload operations.
NOTE 3 In addition, on-board fault management should assist in rapid diagnosis and subsequent reconfiguration back to an optimal operational status.

1106 *on-board monitoring*

ISO 14950:2004 3.2.14 TC20/SC14/WG3

1393 set of processing functions that is applied to a set of on-board parameters
NOTE 1 These functions can include limit/status/delta checking, the evaluation of statistics, including minimum and maximum values over a time interval, etc.
NOTE 2 Detected events or evaluation results are telemetred to ground.
NOTE 3 The scope of the function can be even wider, e.g. to include the triggering of on-board actions in response to detected events.

1107 *on-board operations procedure*

ISO 14950:2004 3.2.16 TC20/SC14/WG3

1394 simple operations procedure that can be controlled from the ground (loaded, edited, started, stopped, etc.) or can be invoked by the occurrence of a predefined on-board event
NOTE In its simplest implementation, an operations procedure can consist of a sequence of low-level commands, historically referred to as a macrocommand.

1108 *on-board operations scheduling*

	ISO 14950:2004	3.2.15	TC20/SC14/WG3

1395 capability for controlling and executing commands that were loaded in advance from the ground
NOTE In its simplest form, the on-board operations schedule stores time-tagged commands loaded from the ground and releases them to the destination application process when their on-board time is reached, but with no feedback being generated by the destination application process.

1109 *one-third-octave*

1/3 Oct	**ISO 19924:2017**	3.13	TC20/SC14/WG2

1396 interval between centre frequencies (3.7) which have a ratio equal to 21/3

1110 *one-through cooling*

	ISO 17540:2016	2.25 Engine cooling 2.25.2	TC20/SC14/WG2

1397 engine external cooling performed by a cooler flowing through a cooling channel in the wall of the chamber (2.2.1) and gas generator (2.2.4)

1111 *one-zone gas generator*

	ISO 17540:2016	2.13 Gas generator types 2.13.1	TC20/SC14/WG2

1398 gas generator (2.2.4) where all phases of the operating process are provided with items of the mixture generation constructional units placed on the internal bottom of the mixing system (2.12.4)

1112 *on-line test*

	ISO 17540:2016	2.29 Types of engine tests: Associate with rocket 2.29.1	TC20/SC14/WG2

1399 integrated test
engine test (2.27.1) in a propulsion system or rocket

1113 *onset of susceptibility*

	ISO 24637:2009	3.1.3	TC20/SC14/WG1

1400 degradation in product performance of at least one functional characteristic beyond equipment under test parameter tolerance

1114 *on-time*

	ISO 17540:2016	2.9 Low-thrust engine performance 2.9.8	TC20/SC14/WG2

1401 inclusion
time interval from the moment of voltage being applied to the thruster electric valve up to the moment of reenergizing the LTE (2.1.3)

1115 *open circuit voltage*

Voc	**ISO 15387:2005**	3.22	TC20/SC14/WG1

1402 voltage across a solar cell with no load at a particular temperature and irradiance

ISO 17546:2016	3.26	TC20/SC14/WG1

1403 difference in electrical potential voltage between the terminals of a cell or battery measured when the circuit is open (no-load condition) and no external current is flowing [3][6]

[3] JSC20793 rev.B, "CREWED SPACE VEHICLE BATTERY SAFETY REQUIREMENTS"
[6] ST/SG/AC. 10/11/Rev.5/Amend.1, "United Nations Transport of Dangerous Goods UN Manual of Tests and Criteria, Part III, sub-section 38.3 Fifth revised edition Amendment 1"

1116 *Open-loop control*

ISO 19924:2017	3.16	TC20/SC14/WG2

1404 control action not using any automatic means of deviations from the target value

1117 *operability*

ISO 14950:2004	3.1.7	TC20/SC14/WG3

1405 ⟨spacecraft⟩ feature of the spacecraft itself that enables a specified ground segment to operate the space segment during the complete mission lifetime of the spacecraft
NOTE See the Introduction, 0.2, for further details defining spacecraft operability.

1118 *operable state*

ISO 17540:2016	2.39 Engine reliability 2.39.2	TC20/SC14/WG2

1406 engine state when it can develop thrust of a specified value and direction, fulfil specified requirements for provision of a specific thrust impulse, fuel component ratio and rocket component operating conditions

Note 1 to entry: The specified customer requirements are provided in the process of development and delivery into operation.

1119 *operating cycles*

ISO 10795:2019	3.160	TC20/SC14/WG5

1407 cumulative number of times an item (3.134) completes a sequence of activation and returns to its initial state

1120 *operating defect*

ISO 17540:2016	2.40 Engine defects 2.40.3	TC20/SC14/WG2

1408 engine defect caused by a specified operating conditions breach

1121 *operating environments*

ISO 21648:2008	2.1.30	TC20/SC14/WG1

1409 all environments experienced during service life of the flywheel module

1122 *operating life*

	ISO 10795:2019	3.161	TC20/SC14/WG5

1410 maximum operating time or cycles that an item (3.134) can accrue before replacement or refurbishment without risk (3.206) of degradation of performance (3.166) beyond acceptable limits

1123 *operating process*

	ISO 17540:2016	2.14 Operating process in chamber (gas generator) 2.14.1, 2.14.2	TC20/SC14/WG2

1411 <in chamber> set of processes in the combustion chamber (2.12.1) of an engine chamber for the transformation of propellant components and/or gas generation products to combustion products

<in gas generator> set of processes in the combustion chamber (2.12.2) of an engine gas generator for the transformation of propellant components to gas generation products

1124 *operating test conditions*

	ISO 17540:2016	2.37 Test conditions 2.37.2	TC20/SC14/WG2

1412 engine test conditions are equal to the specified by design documentation for the intended use in operation

1125 *operation*

	ISO 14950:2004	3.1.6	TC20/SC14/WG3

1413 <spacecraft> activity performed from a mission control centre
NOTE See the Introduction, 0.1, for further details defining spacecraft operation.

1126 *operation and maintenance manual*

O&M manual	ISO 26870:2009	3.11	TC20/SC14/WG3

1414 collection of documents that provide the information necessary to familiarize the personnel with the operation and maintenance of a facility, system or item of equipment

1127 *operation cycle*

	ISO 17540:2016	2.42 Engine operation 2.42.2	TC20/SC14/WG2

1415 in-service live
operating periodically of a recurrent part from its beginning to the end of engine intended use or to the end of it or its return after intended use for the purpose of maintenance

1128 *operation mode with connected pulses*

	ISO 17540:2016	2.11 Low-thrust engine operation modes 2.11.4	TC20/SC14/WG2

1416 LTE pulse mode where, during the off-time (2.9.10), the thrust or the chamber pressure falls to a value higher than 0,1 of the thrust or the chamber pressure of the steady-state continuous mode

1129 *operational concept*

	ISO/TR 16158:2013	3.7	TC20/SC14/WG3

1417 roles, relationships, and information flows among tasks and stakeholders and the manner in which systems and processes will be used

1130 *operational document original*

	ISO 26870:2009	3.13	TC20/SC14/WG3

1418 operational document containing the necessary original signatures, or electronic version containing personal codes of the officials signing the document and protected from unauthorized changes
NOTE Copies are supplied to users.

1131 *operational envelope*

	ISO 26871:2012	3.1.28	TC20/SC14/WG1

1419 set of conditions in which the device or system meets its requirements

1132 *operational environment*

	ISO 16290:2013	2.11	TC20/SC14/WG5

1420 set of natural and induced conditions that constrain the element (2.4) from its design definition to its operation
EXAMPLE 1 Natural conditions: weather, climate, ocean conditions, terrain, vegetation, dust, light, radiation, etc.
EXAMPLE 2 Induced conditions: electromagnetic interference, heat, vibration, pollution, contamination, etc.

1133 *operational instruction*

OI	**ISO 26870:2009**	3.12	TC20/SC14/WG3

1421 operational instruction
operational procedure

document containing detailed descriptions of the complex, system operations or tests required for space vehicle launch preparation and launch

1134 *operational modes*

	ISO 15864:2004	3.1.5	TC20/SC14/WG2

1422 modes for spacecraft, subsystems and units that include all combinations of operational configurations that can occur during service life
EXAMPLE Power on or power off, the main or redundant system is selected.

1135 *operational performance requirements*

	ISO 16290:2013	2.12	TC20/SC14/WG5

1423 subset of the performance requirements (2.14) of an element (2.4) specifying the element functions (2.5) in its operational environment (2.11)
Note 1 to entry: The operational performance requirements are expressed through technical specifications covering all engineering domains. They are validated through successful in orbit operation and can be verified through a collection of element verifications on the ground which comprehensively cover the operational case.
Note 2 to entry: The full set of performance requirements of an element consists of the operational performance requirements and the performance requirements for the use of the element on ground.

1136 *operational procedure*

OI	ISO 26870:2009	3.12	TC20/SC14/WG3

1424 operational instruction
operational procedure

document containing detailed descriptions of the complex, system operations or tests required for space vehicle launch preparation and launch

1137 *operational reserve of capacity for work parameter*

	ISO 17540:2016	2.43 Analysis of engine technical status 2.43.4	TC20/SC14/WG2

1425 reserve of capacity for work parameter (2.43.3) at operating conditions

1138 *operational safety*

	ISO/TS 18667:2018	3.1.8	TC20/SC14/WG5

1426 level of safety risk to a system, the environment, or the occupational health of personnel caused by another system or end item when employed in an operational environment

1139 *operational tests*

	ISO 24917:2010	3.33	TC20/SC14/WG2

1427 tests conducted at the launch vehicle site in an operational environment, with the equipment in its operational configuration

1140 *operations agency*

	ISO 23041:2018	3.5	TC20/SC14/WG3

1428 agency responsible for the operations and maintenance of the space systems and organization to which the operations crew members belong

1141 *operations crew members*

	ISO 23041:2018	3.6	TC20/SC14/WG3

1429 personnel who will be using the operations handbook to support space systems

1142 *operations organization*

	ISO 14711:2003	2.4	TC20/SC14/WG3

1430 people and procedures that control the flight element, including payload, and process the mission data and information

1143 *operator*

	ISO 14620-2:2019	3.15	TC20/SC14/WG5

1431 governmental or non-governmental entities, international organization, or natural person carrying out a space operation independently and under its responsibility

	ISO 20892:2018	3.10	TC20/SC14/WG5

1432 governmental or non-governmental entities, international organization, or natural person carrying out a space operation independently and under its responsibility
[SOURCE: ISO 14620-2:2011]

1144 *optical fibre*

	ISO 20780:2018	3.1.1	TC20/SC14/WG1

1433 filament shaped optical waveguide made of dielectric materials
[SOURSE: IEC 60050]

1145 *optical fibre cable*

	ISO 20780:2018	3.1.2	TC20/SC14/WG1

1434 assembly comprising one or more optical fibres or fibre bundles inside a common covering designed to protect them against mechanical stresses and other environmental influences while retaining the transmission quality of the fibres
[SOURSE: IEC 60050]

1146 *optical fibre pigtail*

	ISO 20780:2018	3.1.3	TC20/SC14/WG1

1435 short length of optical fibre, usually permanently attached to a component and intended to facilitate
jointing between that component and another optical fibre or component
Note 1 to entry: "Launching fibre" is synonymous with optical fibre pigtail only when the latter is connected to an optical sourse.
[SOURSE: IEC 60050]

1147 *orbit*

	ISO 27852:2016	3.1.9	TC20/SC14/WG3

1436 path followed by a space object

1148 *orbit lifetime*

	ISO 24113:2019	3.18	TC20/SC14/WG7

1437 elapsed time between an orbiting space object's (3.24) initial or reference position and its re-entry (3.22)
Note 1 to entry: Examples of "initial position" are the injection into orbit of a spacecraft (3.25) or launch vehicle orbital stage (3.13), or the instant when space debris (3.23) is generated. An example of a "reference position" is the orbit of a spacecraft or launch vehicle orbital stage at the end of mission (3.10).

	ISO 27852:2016	3.1.1	TC20/SC14/WG3

1438 elapsed time between the orbiting satellite's initial or reference position and orbit demise/reentry
Note 1 to entry: An example of the orbiting spacecraft's reference position is the post-mission orbit.
Note 2 to entry: The orbit's decay is typically represented by the reduction in perigee and apogee altitudes (or radii) as shown in Figure 1.

1149 *orbital debris*

	ISO 16126:2014	3.12	TC20/SC14/WG7

1439 space debris (preferred term)
orbital debris (preferred term)

man-made objects, including fragments and elements thereof, in Earth orbit or re-entering the atmosphere, that are non-functional
[SOURCE: ISO 24113:2011, 3.17] .

	ISO 23339:2010	3.5	TC20/SC14/WG3

1440 orbital debris
space debris
all man-made objects, including fragments and elements thereof, in Earth orbit or re-entering the atmosphere, that are non-functional

	ISO 24113:2019	3.23	TC20/SC14/WG7

1441 space debris
DEPRECATED: orbital debris
objects of human origin in Earth orbit (3.8) or re-entering the atmosphere, including fragments and elements thereof, that no longer serve a useful purpose
Note 1 to entry: Spacecraft (3.25) in reserve or standby modes awaiting possible reactivation are considered to serve a useful purpose.

1150 *orbital disposal*

	ISO 10795:2019	3.162	TC20/SC14/WG5

1442 actions (3.9) performed by a spacecraft (3.224) or launch vehicle (3.139) orbital stage to permanently reduce its chance of accidental break-up and to achieve its required long-term clearance of the protected regions
[SOURCE: ISO 24113:2011, 3.4, modified – term has been changed from "disposal" to “orbital disposal".]

1151 *orbital launch stage*

	ISO 16699:2015	3.6	TC20/SC14/WG3

1443 launcher orbital propulsive element that is discarded by the time the payload reaches orbit, usually
only the last propulsive element

1152 *orbital lifetime*

	ISO 16126:2014	3.9	TC20/SC14/WG7

1444 period of time from when a spacecraft achieves Earth orbit to when it commences re-entry
[SOURCE: ISO 24113:2011,3.12, modified]

1153 *organization*

	ISO 10795:2019	3.163	TC20/SC14/WG5

1445 person or group of people that has its own functions (3.110) with responsibilities, authorities and relationships to achieve its objectives
Note 1 to entry: The concept of organization includes, but is not limited to, sole-trader, company, corporation, firm, enterprise, authority, partnership, association, charity or institution, or part or combination thereof, whether incorporated or not, public or private.
Note 2 to entry: This constitutes one of the common terms and core definitions for ISO management system (3.147) standards (3.228) given in Annex SL of the Consolidated ISO Supplement to the ISO/IEC Directives, Part 1. The original definition has been modified by modifying Note 1 to entry.
[SOURCE: ISO 9000:2015, 3.2.1]

	ISO 18676:2017	3.2	TC20/SC14/WG5

1446 person or group of people that has its own functions with responsibilities, authorities and relationships to achieve its objectives
[SOURCE: ISO 9000:2015, 3.2.1]

1154 *original budget*

	ISO 10795:2019	3.164	TC20/SC14/WG5

1447 budget established at, or near, the time the contract (3.65) was signed, based on the negotiated contract cost

1155 *orthogonal scanning*

	ISO 10830:2011	3.7	TC20/SC14/WG6

1448 scanning method used in incident-angle scanning in which setting angles (data collection points) form a square lattice

1156 *oscillating load*

	ISO 14622:2000	2.5.4	TC20/SC14/WG1

1449 load whose amplitude or direction varies within a frequency range for which the structure's dynamic response significant
NOTE This load can be induced by:
- POGO effect;
- buffeting;
- vortex shedding due to ground wind;
- flutter;
- acoustic environment;
- rotation of parts;
- combustion instabilities in solid propellant stages.

1157 *other non-flight item*

	ISO 22108:2008	2.2	TC20/SC14/WG3

1450 item of non-flight equipment that is not considered in the procedure described in this International Standard
EXAMPLE Tape and connector caps that can be used to provide temporary protection.

1158 *outgassing*

	ISO 15388:2012	3.1.34	TC20/SC14/WG6

1451 evolution of gaseous species from a material, usually in a vacuum
NOTE Outgassing also occurs in higher-pressure environments.

1159 *over discharge*

	ISO 17546:2016	3.28	TC20/SC14/WG1

1452 to discharge a cell or battery past the point determined by cell supplier where the full capacity has been obtained
Note 1 to entry: Continuous discharging a cell or battery below zero volts causing voltage reversal is defined as forced discharge. [3]

[3] JSC20793 rev.B, "CREWED SPACE VEHICLE BATTERY SAFETY REQUIREMENTS"

1160 *overall risk*

	ISO 17666:2016	3.1.8	TC20/SC14/WG5

1453 risk resulting from the assessment of the combination of individual risks and their impact on each other, in the context of the whole project
Note 1 to entry: Overall risk can be expressed as a combination of qualitative and quantitative assessment

1161 *overall sound pressure level*

OASPL	**ISO 19924:2017**	3.5	TC20/SC14/WG2

1454 value computed from one-third-octave (3.13) or octave band sound pressure levels, Li
(See formula in standard)
where
Lg is the overall sound pressure level in dB;
Li is the sound pressure level (3.5) in one-third-octave or octave band;
m is the number of one-third-octave or octave bands.

1162 *overcharge*

	ISO 17546:2016	3.27	TC20/SC14/WG1

1455 charge past the manufacturer's recommended limit of voltage

1163 *over-expansion*

	ISO 17540:2016	2.18 Nozzle operation modes 2.18.3	TC20/SC14/WG2

1456 nozzle operating mode when gas pressure at the exit section is lower than the environment pressure

1164 *overload*

	ISO 14953:2000	2.3	TC20/SC14/WG1

1457 excess of internal distributed load used for certain calculations to account for design

1165 *Oxidizer*

	ISO 14952-1:2003	2.18	TC20/SC14/WG6

1458 chemical reactants, such as liquid oxygen and nitrogen tetroxide, which when combined with appropriate fuels constitute the propellants for rocket engines
NOTE For the purposes of this part of ISO 14952, gaseous oxygen and breathing air are considered to be oxidizers.

1166 *oxidizer compartment*

	ISO 17540:2016	2.52 Stand compartmen ts 2.52.5	TC20/SC14/WG2

1459 stand compartment used for the oxidizer storage tanks and other elements of the oxidizer supply system

1167 *oxygen compatibility*

	ISO 22538-4:2007	3.6	TC20/SC14/WG6

1460 ability of a material to coexist with oxygen and a potential source of ignition at an expected pressure and temperature

1168 *oxygen-enriched atmosphere*

	ISO 22538-1:2007	3.1.3	TC20/SC14/WG6

1461 mixture (gas or liquid) that contains more than 25 volume percent oxygen

	ISO 22538-2:2007	3.1.3	TC20/SC14/WG6

1462 mixture (gas or liquid) that contains more than 25 volume percent oxygen

	ISO 22538-3:2007	3.1.4	TC20/SC14/WG6

1463 mixture (gas or liquid) that contains more than 25 volume percent oxygen

	ISO 22538-4:2007	3.7	TC20/SC14/WG6

1464 any gas or liquid that contains more than 25 volume percent oxygen

	ISO 22538-5:2010	2.1.1	TC20/SC14/WG6

1465 gas mixture or liquid mixture that contains more than 25 volume percent oxygen

1169 *ozone content*

	ISO 15387:2005	3.23	TC20/SC14/WG1

1466 volume of ozone at standard temperature and pressure in a vertical column of the atmosphere
NOTE Ozone content is measured with a Dobson spectrophotometer.

1170 *packaged charge*

	ISO 26871:2012	3.1.29	TC20/SC14/WG1

1467 explosive material in a closed container

1171 *paint*

	ISO 16691:2014	3.1.7	TC20/SC14/WG6

1468 pigmented coating material which, when applied to a substrate, generally forms an opaque film having protective or specific technical properties
[SOURCE: ISO 4618:2006]

1172 *paint film*

	ISO 16691:2014	3.1.8	TC20/SC14/WG6

1469 intact coating that is formed by applying one or muRiple layers of coating materials on a substrate

1173 *Parameter*

	ISO 14950:2004	3.2.17	TC20/SC14/WG3

1470 elementary data item on-board
NOTE A parameter has a unique interpretation.

1174 *parameter validity*

	ISO 14950:2004	3.2.18	TC20/SC14/WG3

1471 conditions that determine whether the interpretation of a given telemetry parameter is meaningful
EXAMPLE The angular output of a gyro may only have a valid engineering meaning if the power to the gyro is “on” while at other times, the output may be random, or at best should not be relied upon.
NOTE Such a parameter is deemed conditionally valid, with its validity determined from the power status.

1175 *part*

	ISO 10795:2019	3.48	TC20/SC14/WG5

1472 component
part

set of materials (3.148), assembled according to defined and controlled processes (3.171), which cannot be disassembled without destroying its capability and which performs a simple function (3.110) that can be evaluated against expected performance (3.166) requirements (3.201)
[SOURCE: EN 16601-00-01:2015, 2.3.37, modified – NOTE 1 and 2 have been removed.]

	ISO 14952-1:2003	2.19	TC20/SC14/WG6

1473 one unit of two or more pieces joined together in such a way that it is not normally disassembled without destruction of the designed use
NOTE A part is the basic unit in an assembly, component, subsystem, or system.
EXAMPLE Fittings, O-rings, and poppets are normally considered pieces that comprise a valve that is considered a part of an assembly (2.2).

1176 *particle*

	ISO 14952-1:2003	2.20	TC20/SC14/WG6

1474 unit of solid or liquid matter with observable size

	ISO 15388:2012	3.1.35	TC20/SC14/WG6

1475 unit of solid or liquid matter with observable size
[ISO 14952-1:2003, 2.20]
NOTE See also 3.1.38, particle size.

1177 *particle charge Z*

	ISO 17520:2016	2.6	TC20/SC14/WG4

1476 charge Z of a particle is equal to +ne, (n = 1, 2, 3,….), where e is the value of electron charge (1,60 × 10−19 C).

1178 *particle concentration*

	ISO 15388:2012	3.1.36, 3.1.37	TC20/SC14/WG6

1477 3.1.36
particle concentration
⟨on surface⟩ number of particles per unit area
3.1.37
particle concentration
⟨by volume⟩ number of particles per unit volume of fluid

	ISO 15860:2006	3.1.3	TC20/SC14/WG3

1478 number of separate aerosol particles of specified size in a unit of gas volume

1179 *Particle energy*

E	**ISO/TR 18147:2014**	2	TC20/SC14/WG4

1479 Particle energy (MeV/nucleon).

1180 *Particle fluence*

F	**ISO/TR 18147:2014**	2	TC20/SC14/WG4

1480 The total (time-integrated) number of particles in given space mission that traverse a unit area from all directions from solid angle 4π (particle/cm2).

1181 *particle magnetic rigidity*

	ISO 17520:2016	2.7	TC20/SC14/WG4

1481 magnetic rigidity of particle R is related to particle momentum p and its charge by:
R = pc/Z
where c is the speed of light, and Z is the charge of a particle
Note 1 to entry: The magnetic rigidity of protons and nuclei is related to the particle's energy as R =A/Z ((E(E+2Mo))½ where E is the kinetic energy in GeV/u, A is the particle's mass in amu, and Mo is the rest mass of proton equal to 0,931 GeV.

	ISO 17761:2015	2.2	TC20/SC14/WG4

1482 magnetic rigidity of particle, R, is related to particle momentum, p, and its charge, Z, by:
R = pc/Z, where c is the speed of light. [3]
[3] ISO 16695, Space environment (natural and artificial) — Geomagnetic reference models

1182 *Particle peak flux*

f	**ISO/TR 18147:2014**	2	TC20/SC14/WG4

1483 The time when a maximum number of particles traverse a unit area during the space mission, normally to a given observation, direction in unit time through unit solid angle [proton/ (cm2·sr·s)].
NOTE The fluxes of particles with different energy reach maximum values at different times during the SEP event.

1183 *particle size*

ISO 14952-1:2003 2.21 TC20/SC14/WG6

1484 NOTE Various methods for defining size may be used and are dependant upon the measurement technique.

2.21.1
particle size
<manual method> apparent maximum linear dimension of a particle in the plane of observation as observed with instruments such as optical, electron, or atomic force microscopes
2.21.2
particle size
<automatic method> equivalent diameter of a particle detected by automatic instrumentation
NOTE The equivalent diameter is the diameter of a reference sphere having known properties and producing the same response in the sensing instrument as the particle being measured

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ISO 15388:2012 3.1.38 TC20/SC14/WG6

1485 NOTE Various methods for defining size may be used and are dependent upon the measurement technique.
3.1.38.1
particle size
⟨manual method⟩ apparent maximum linear dimension of a particle in the plane of observation as observed with instruments such as optical, electron, or atomic force microscopes
[ISO 14952-1:2003, 2.21.1]

3.1.38.2
particle size
⟨automatic method⟩ equivalent diameter of a particle detected by automatic instrumentation
NOTE The equivalent diameter is the diameter of a reference sphere having known properties and producing the same response in the sensing instrument as the particle being measured.
[ISO 14952-1:2003, 2.21.2]

ISO 15860:2006 3.1.4 TC20/SC14/WG3

1486 particle maximum linear size measured by an optical microscope or particle equivalent size received with the help of automatic instruments

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1184 *particulate*

ISO 15859-7:2004 3.1, 3.2 TC20/SC14/WG6

1487 3.1
particulate
⟨standard grade⟩ undissolved solids retained on a filter paper with a 10-μm nominal and 40-μm absolute rating
3.2
particulate
⟨monopropellant and high purity grades⟩ undissolved solids retained on a filter paper with a 2-μm nominal and 10-μm absolute rating

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1185 *particulate contamination*

ISO 15388:2012 3.1.39 TC20/SC14/WG6

1488 contamination due to deposition of particles on surfaces or suspension of particles in fluids

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1186 *particulate matter*

ISO 15859-1:2004 3.1 TC20/SC14/WG6

1489 undissolved solids retained on a filter paper with a 10 µm absolute rating

ISO 15859-5:2004 3.1 TC20/SC14/WG6

1490 undissolved solids retained on a filter paper with a 10 µm nominal and 40 µm absolute rating

ISO 15859-6:2004 3.1 TC20/SC14/WG6

1491 undissolved solids retained on a filter paper with a 10-µm nominal and 40-µm absolute rating

ISO 15859-8:2004 3.1 TC20/SC14/WG6

1492 undissolved solids retained on a filter paper with a 10-µm nominal and 40-µm absolute rating

1187 *part-thrust impulse*

ISO 17540:2016 2.9 Low-thrust engine performance 2.9.2 TC20/SC14/WG2

1493 thruster impulse of LTE (2.1.3) at which the average integral value of thrust, or pressure (2.7.7) in the chamber (2.2.1), is less than 0,9 the steady-thrust, or pressure in the chamber, at a switch

1188 *passivate*

ISO 24113:2019 3.19 TC20/SC14/WG7

1494 <space debris mitigation> act of permanently depleting, irreversibly deactivating, or making safe all on-board sources of stored energy capable of causing an accidental break-up (3.2)
Note 1 to entry: Passivation reduces the chance of an accidental explosion that could generate space debris (3.23).
Note 2 to entry: Residual propellants, batteries, high-pressure vessels, self-destruct devices, flywheels and momentum wheels are examples of on-board sources of stored energy capable of causing an accidental break-up.

1189 *passivation*

ISO 14952-1:2003 2.22 TC20/SC14/WG6

1495 process by which a corrosive-resistant layer is bonded to a metal surface by submersing the surface in an acid solution

ISO 16127:2014 3.3 TC20/SC14/WG7

1496 elimination of all stored energy on a space system to reduce the chance of break-up
Note 1 to entry: Typical passivation measures include venting or burning excess propellant, discharging batteries, and relieving pressure vessels.

ISO 16164:2015 3.6 TC20/SC14/WG3

1497 act of permanently depleting or making safe all remaining on-board sources of stored energy in a controlled sequence

	ISO 16699:2015	3.7	TC20/SC14/WG3

1498 elimination of all stored energy on a space system to reduce the chance of break-up
Note 1 to entry: Typical passivation measures for spacecraft include venting or burning excess propellant, discharging batteries, and relieving pressure vessels (see IS0 16127 for examples).

1190 *passive fibre optic component*

	ISO 20780:2018	3.1.5	TC20/SC14/WG1

1499 fibre optic components that could realize certain photoelectric functions with no need for external energy, including fibre optic connectors, optical fibre couplers, wavelength division multiplexers, fibre optic attenuators, fibre optic filters, fibre optic isolators, circulators, polarization controllers, fibre delay lines and fibre optic gratings

1191 *passive thermal control system*

	ISO 16691:2014	3.1.9	TC20/SC14/WG6

1500 system where the passive thermal control method is used
Note 1 to entry: The passive thermal control method is the procedure to control the temperature of the component within the specified range by adjusting the paths of conduction and radiation, and by the selection of geometric form of each surface and thermo-physical property of the spacecraft.
[SOURCE: JERG-2-310:2009]

1192 *pause between inclusions*

	ISO 17540:2016	2.9 Low-thrust engine performance 2.9.10	TC20/SC14/WG2

1501 off-time
time interval from the moment of the thruster electric valve reenergizing up to the moment of the next voltage being applied

1193 *payload*

P/L	**ISO 10795:2019**	3.165	TC20/SC14/WG5

1502 set of space segment elements (3.222) (parts of a space system (3.223), placed in space, to fulfil the space mission (3.220) objectives)
Note 1 to entry: A spacecraft (3.224) payload is a set of instruments or equipment (3.93) that performs the user mission.
Note 2 to entry: A launcher (3.139) payload is a set of space segment elements carried into space in accordance with agreed position, time and environmental conditions.

	ISO 14954:2005	3.1.1	TC20/SC14/WG1

1503 system that is launched by a launch vehicle
EXAMPLES Satellite, spacecraft, space probe

	ISO 16691:2014	3.1.10	TC20/SC14/WG6

1504 set of space segment elements (parts of a space system placed in space to fulfill the space mission objectives)
Note 1 to entry: A spacecraft payload is a set of instruments or equipment that performs the user mission.
Note 2 to entry: A launcher payload is a set of space segment elements carried into space in accordance with agreed position, time, and environmental conditions.
[SOURCE: ISO 10795:2011]

	ISO 17689:2015	2.8	TC20/SC14/WG2

1505 space vehicle or group of space vehicles on a single-launch vehicle intended to perform a specified function or series of functions
[SOURCE: ISO 14620-2:2011, 3.24]

1194 *Payload Adapter*

PLA	ISO 14303:2002	2.5	TC20/SC14/WG2

1506 Structure that mates the spacecraft to the launch vehicle, including the SC-LV separation system
NOTE The PLA is a part of the LV and does not separate with the SC.

1195 *payload contractor*

	ISO 14954:2005	3.1.2	TC20/SC14/WG1

1507 organization in charge of a payload

1196 *penumbra*

	ISO 17520:2016	2.11	TC20/SC14/WG4

1508 rigidity range lying between the main (upper) and the lower cut-off rigidities

1197 *perforation*

	ISO 11227:2012	3.1.9	TC20/SC14/WG7

1509 hole created by an impact on a thin material in which there is no formation of a crater

1198 *performance*

	ISO 10795:2019	3.166	TC20/SC14/WG5

1510 quantifiable characteristics (3.41) of a function (3.110)
[SOURCE: EN 16601-00-01:2015, 2.3.152]

	ISO 16290:2013	2.13	TC20/SC14/WG5

1511 aspects of an element (2.4) observed or measured from its operation or function
Note 1 to entry: These aspects are generally quantified.
Note 2 to entry: Adapted from ISO 10795, definition 1.155.

1199 *Performance Requirements*

	ISO 16290:2013	2.14	TC20/SC14/WG5

1512 set of parameters that are intended to be satisfied by the element (2.4)
Note 1 to entry: The complete set of performance requirements inevitably include the environment conditions in which the element is used and operated and are therefore linked to the mission(s) under consideration and also to the environment of the system in which it is incorporated.

1200 *performance specification*

	ISO 14621-1:2019	3.1.5	TC20/SC14/WG5

1513 document that defines what the customer desires as a product, its operational environments and all required performance characteristics

1201 period of propellant flow

	ISO 17540:2016	2.8 Engine time characteristics, types of operating and resources 2.8.1	TC20/SC14/WG2

1514 time interval from the moment of complete opening of the solenoid valve until it is completely closed

1202 periodic confirmation test

	ISO 17540:2016	2.34 Types of engine tests: Test purposes 2.34.9	TC20/SC14/WG2

1515 engine periodic test for the purpose of making a decision perform an acceptance the inspection of each sample made within a set time of production

1203 permanent sustained arc

	ISO 11221:2011	2.16	TC20/SC14/WG4

1516 passage of current from an external source through a conductive path that keeps flowing until the external source is intentionally shut down
See Figure 1 in standard.
NOTE Some permanent sustained arcs may leave a permanent conductive path even after the shut-down.

1204 personnel's approach

	ISO 10785:2011	3.22	TC20/SC14/WG1

1517 action or state of a ground crew approach when near to the bellows or another component while the component is pressurized

1205 pH

	ISO 14952-1:2003	2.23	TC20/SC14/WG6

1518 value taken to represent the acidity or alkalinity of an aqueous solution
NOTE 1 pH is defined as the logarithm of the reciprocal of the hydrogen ion concentration of a solution.
NOTE 2 The pH is measured over the nominal range of 0 to 14.
NOTE 3 A pH reading below 7 is acidic, pH 7 is neutral, and pH above 7 is alkaline.

1206 physical characteristic

	ISO 21886:2019	3.1.2	TC20/SC14/WG5

1519 quantitative and qualitative expression of a product and its tolerance
EXAMPLE Mechanical, electrical, chemical or biological characteristic.

1207 pickling

	ISO 14952-1:2003	2.24	TC20/SC14/WG6

1520 chemical or electrochemical process by which surface oxides are removed from metals

1208 pin nozzle

	ISO 17540:2016	2.15 Nozzle types 2.15.6	TC20/SC14/WG2

1521 nozzle with external expansion
ring nozzle (2.15.5) in which the external zone is almost or completely absent at the expanding part contour

1209 *pipeline*

	ISO 17540:2016	2.51 Stand system elements 2.51.6	TC20/SC14/WG2

1522 stand pipeline
stand system pipeline for propellant components connecting the elements of the stand

1210 *pipeline filling*

	ISO 17540:2016	2.51 Stand system elements 2.51.9	TC20/SC14/WG2

1523 propellant flow from propellant storage to the main and/or starter tanks

1211 *planar width of beam spread*

	ISO 10830:2011	3.12	TC20/SC14/WG6

1524 transversal range of a beam in which the echo of a flat-bottomed hole equivalent to the flaw to be detected appears at a height above the specified echo level in beam-index scanning

1212 *plasma gun*

	ISO 11227:2012	3.1.10	TC20/SC14/WG7

1525 experimental device that produces an accelerated plasma flow, which is compressed in a coil and then drags a projectile up to hypervelocities

1213 *plasmapause*

	ISO 16457:2014	2.3	TC20/SC14/WG4

1526 outward boundary of the plasmasphere located at between two and six earth radii from the centre of the Earth and formed by geomagnetic field lines where the plasma density drops by a factor of 10 or more across a range of L-shells of as little as 0,1
Note 1 to entry: The L-shell is a parameter describing a particular set of planetary magnetic field lines, often describing the set of magnetic field lines which cross the Earth's magnetic equator at a number of Earth-radii equal to the L-value, e.g. "L = 2" describes the set of the Earth's magnetic field lines which cross the Earth's magnetic equator two earth radii from the centre of the Earth.

1214 *plasmasphere*

	ISO 16457:2014	2.2	TC20/SC14/WG4

1527 torus of cold, relatively dense (>10 cm-3) plasma of mostly H+ in the inner magnetosphere, which is trapped on the Earth's magnetic field lines and co-rotates with the Earth
Note 1 to entry: Cold plasma is considered to have an energy of between a few electronvolts and a few dozen electronvolts.

1215 *plastically responding metallic liner*

ISO 14623:2003 2.45 TC20/SC14/WG1

1528 metallic liner of a composite overwrapped pressure vessel that could at least once experience plastic response when pressurized to any pressure up to and including acceptance proof pressure after the autofrettage operation

1216 *plate*

ISO 15389:2001 3.12 TC20/SC14/WG3

1529 device that groups coupling and connector halves together to provide a common means for retention
NOTE 1 The plate is a passive device, containing cooperating but usually immobile portions of positioning, locking, separation machinery.
NOTE 2 The term is commonly used in relation to the vehicle side of umbilical interfaces or with the carrier.
EXAMPLE Carrier plate

1217 *POD*

ISO 19683:2017 3.5 TC20/SC14/WG1

1530 box housing CubeSats (3.6) during launch

1218 *POGO*

ISO 10786:2011 3.38 TC20/SC14/WG1

1531 instability due to the coupling between the vehicle axial motion and the dynamic response characteristic of the propulsion system

1219 *Poisson process*

ISO 11221:2011 2.17 TC20/SC14/WG4

1532 stochastic process in which events occur independently of one another

1220 *polar cap magnetic activity*

ISO/TR 23989:2020 3.6 TC20/SC14/WG4

1533 magnetic short-term (minutes or tens of minutes) variations generated in the near-pole region by interplanetary electric field (3.2)
Note 1 to entry: Value of the polar cap magnetic activity is estimated by the 1-min PC index [Troshichev et al., 1988; Troshichev, 2018].

1221 *Poly Picosatellite Orbital Deployer*

P-POD **ISO 17770:2017** 3.3 TC20/SC14/WG1

1534 example of a CubeSat Deployer
Note 1 to entry: In recognition of the original design by the California Polytechnic State University – Cal Poly.
Note 2 to entry: The P-POD is Cal Poly's standardized CubeSat deployment system. It is capable of carrying three standard CubeSats

1222 *post-launch maintenance*

ISO 26870:2009 3.14 TC20/SC14/WG3

1535 activities required to repair damage to the launch pad caused by launch of a space vehicle

1223 ***post-mission orbit lifetime***

	ISO 27852:2016	3.1.7	TC20/SC14/WG3

1536 duration of the orbit after completion of the mission phase
Note 1 to entry: The disposal phase duration is a component of post-mission duration.

1224 ***power generation voltage***

	ISO 11221:2011	2.18	TC20/SC14/WG4

1537 potential difference between the positive and negative terminals of a solar array string

1225 ***power quality requirement***

	ISO 14302:2002	3.1.13	TC20/SC14/WG1

1538 requirement developed for the space system that defines the conducted voltage and current noise (from load regulation, spikes, sags, etc.) the power user can expect

1226 ***Power Spectral Density***

PSD	**ISO 19924:2017**	3.19	TC20/SC14/WG2

1539 measure of the distribution of the energy (squared amplitude) of the signal as a function of frequency

1227 ***precision clean***

	ISO 15388:2012	3.1.40	TC20/SC14/WG6

1540 cleaning of hardware by approved engineering methods to meet quantitative cleanliness criteria

1228 ***precision cleaning***

	ISO 14952-1:2003	2.25	TC20/SC14/WG6

1541 cleaning process used to achieve cleanliness levels more stringent than visibly clean (2.35)

1229 ***precleaning***

	ISO 14952-1:2003	2.27	TC20/SC14/WG6

1542 rough cleaning/precleaning
cleaning process normally used to achieve the visibly clean (2.35) cleanliness level

1230 ***predicted mass***

	ISO 22010:2007	3.13	TC20/SC14/WG1

1543 sum of the basic mass and the mass growth allowance, intended to estimate the final mass at system delivery

1231 ***preflight***

	ISO 15389:2001	3.13	TC20/SC14/WG3

1544 term that denotes an occurrence or function before vehicle lift-off

1232 ***preliminary acceptance testing***

	ISO 17540:2016	2.45 Engine quality control 2.45.1	TC20/SC14/WG2

1545 quality control of each engine specimen before acceptance testing

1233 *preliminary design review*

PDR	**ISO 10795:2019**	3.167	TC20/SC14/WG5

1546 review (3.203) performed prior to critical (3.71, 3.72) design (3.82, 3.83) but after preliminary design Note 1 to entry: The review shall confirm that the products (3.173), the results of the preliminary design that satisfy the system (3.234) or development (3.85) specifications (3.227), can be materialized and transferred to the critical design phase.

1234 *preliminary development tests*

	ISO 24917:2010	3.30	TC20/SC14/WG2

1547 preliminary (development) tests
check test of test object prototypes conducted with the purpose of evaluating their conformity with the statement of work requirements and determining their readiness for flight test
NOTE Items are subjected to development tests as required, in order to minimize design risk, to demonstrate manufacturing feasibility, to establish packaging designs, to demonstrate electrical and mechanical performance and to demonstrate the capability to withstand environmental stress, including storage, transportation, extreme combined environments and launch base operations

1235 *Preliminary Hazard Analysis*

PHA	**ISO 10795:2019**	3.168	TC20/SC14/WG5

1548 analysis (3.12) technique for performing an initial risk assessment (3.207) of a concept of a system (3.234) to identify safety-critical areas, evaluate hazards (3.120), and to identify the safety (3.210) design (3.82, 3.83) requirements (3.201) required in the project (3.178)

1236 *preliminary tests*

	ISO 24917:2010	3.30	TC20/SC14/WG2

1549 preliminary (development) tests
check test of test object prototypes conducted with the purpose of evaluating their conformity with the statement of work requirements and determining their readiness for flight test
NOTE Items are subjected to development tests as required, in order to minimize design risk, to demonstrate manufacturing feasibility, to establish packaging designs, to demonstrate electrical and mechanical performance and to demonstrate the capability to withstand environmental stress, including storage, transportation, extreme combined environments and launch base operations

1237 *pressure*

	ISO 16454:2007	3.23	TC20/SC14/WG1

1550 external load caused by fluid action on a structural surface
NOTE The terms “pressure” and “load” are sometimes referred to simultaneously in this International Standard.

	ISO 17540:2016	2.7 General parameters and performance of engine 2.7.7, 2.7.8	TC20/SC14/WG2

1551 <in chamber> average static pressure of combustion products at the beginning of the combustion chamber (2.12.1) at the mixing system chamber

<in gas generator> average static pressure of gas generation at the beginning of the combustion chamber (2.12.2) at the mixing system gas generator

1238 *pressure chamber*

	ISO 17540:2016	2.51 Stand system elements 2.51.14	TC20/SC14/WG2

1552 stand unit designed to simulate operating pressure in an engine or unit

1239 *pressure component*

	ISO 10786:2011	3.39	TC20/SC14/WG1

1553 component in a pressurized system, other than a pressure vessel, pressurized structure that is designed largely by the internal pressure
[ISO 24638:2008]
EXAMPLES Valves, pumps, lines, fittings, hoses and bellows.

	ISO 24638:2008	3.21	TC20/SC14/WG1

1554 component in a pressure system, other than a pressure vessel, or a pressurized structure that is designed largely by the internal pressure
EXAMPLE Lines, fittings, pressure gauges, valves, bellows and hoses.

1240 *pressure system*

	ISO 24638:2008	3.24	TC20/SC14/WG1

1555 system that consists of pressure vessels or pressurized structures, or both, and other pressure components such as lines, fittings, and valves, which are exposed to, and structurally designed largely by, the acting pressure
NOTE The term “pressure system” does not include electrical or other control devices required for system operations

1241 *pressure vessel*

	ISO 10786:2011	3.40	TC20/SC14/WG1

1556 container designed primarily for storage of pressurized fluid that (1) contains gas or liquid with an energy level of 19,310 joules (14,240 foot-pounds) or greater, based on adiabatic expansion of a perfect gas; or (2) contains gas or liquid that will create a mishap (accident) if released; or (3) will experience a MEOP greater than 700 kPa (100 psi)
NOTE Pressurized structures, pressure components and pressurized equipment are excluded from this definition.

	ISO 14623:2003	2.46	TC20/SC14/WG1

1557 container designed primarily for the storage of pressurized fluid that fulfils at least one of the following criteria:
a) contains gas or liquid with high energy level;
b) contains gas or liquid which will create a mishap (accident) if released;
c) contains gas or liquid with high pressure level
NOTE 1 This definition excludes pressurized structures, pressure components and pressurized hardware.
NOTE 2 Energy and pressure level are defined by each project, and approved by the procuring authority (customer); appropriate values are not defined by the project, the following levels are used:
- stored energy is 19 310 J or greater based on adiabatic expansion of perfect gas;
- MEOP is 0,69 MPa or greater.

	ISO 21347:2005	3.26	TC20/SC14/WG1

1558 container designed primarily for the storage of pressurized fluid, which fulfils at least one of the following criteria:
a) contains gas or liquid with high energy level;
b) contains gas or liquid which will create a mishap (accident) if released;
c) contains gas or liquid with high pressure level
NOTE 1 Pressurized structures (3.27), pressure components and pressurized equipment including batteries, heat pipes, cryostats, and sealed containers are excluded.
NOTE 2 Energy and pressure level are defined by each project, and approved by the procuring authority (customer); if appropriate values are not defined by the project, the following levels are used:
- stored energy is 19 310 J or greater based on adiabatic expansion of perfect gas; or
- maximum expected operating pressure (MEOP) is 0,69 MPa or greater.

	ISO 24638:2008	3.22	TC20/SC14/WG1

1559 container designed primarily for the storage of pressurized fluids, which either contains gas/liquid with high energy level, or contains gas/liquid that will create a mishap (accident) if released, or contains gas/liquid with
high pressure level
NOTE 1 This definition excludes pressurized structures and pressure components.
NOTE 2 Energy and pressure levels are defined by each project and approved by the procuring authority (customer). If appropriate values are not defined by the project, the following levels are used:
- stored energy is at least 19 310 J, based on adiabatic expansion of perfect gas;
- MEOP is at least 0,69 MPa.

1242 *pressurized equipment*

	ISO 10786:2011	3.41	TC20/SC14/WG1

1560 pressurized equipment (preferred term)
special pressurized equipment (admitted term)

piece of equipment that meets the pressure vessel definition, but for which it is not feasible or cost effective to
comply with the requirements applicable to pressure vessels
EXAMPLES Batteries, heat pipes, cryostats and sealed containers.

1243 *pressurized hardware*

	ISO 10786:2011	3.42	TC20/SC14/WG1

1561 pressurized hardware includes pressure vessels, pressurized structures, pressure components and pressurized equipment

ISO 14623:2003 2.47 TC20/SC14/WG1

1562 hardware items that contain primarily internal pressure
NOTE In this document, the term covers all pressure vessels and pressurized structures (2.48).

ISO 21347:2005 3.28 TC20/SC14/WG1

1563 hardware items that contain primarily internal pressure
NOTE For the purposes of this International Standard, this term covers all pressure vessels and pressurized structures (3.27).

1244 *pressurized structure*

ISO 10786:2011 3.43 TC20/SC14/WG1

1564 structure designed to carry both internal pressure and vehicle structural loads
[ISO 14623:2003], [ISO 24638:2008]
EXAMPLES Main propellant tanks and solid rocket motor cases of launch vehicles, and crew cabins of manned modules.

ISO 14623:2003 2.48 TC20/SC14/WG1

1565 structure designed to carry both internal pressure and vehicle structural loads
EXAMPLE Launch vehicle main propellant tanks, crew cabins or manned modules.

ISO 21347:2005 3.27 TC20/SC14/WG1

1566 structure designed to carry both internal pressure and vehicle loads
EXAMPLES Launch vehicle main propellant tanks, crew cabins and manned modules.

ISO 24638:2008 3.23 TC20/SC14/WG1

1567 structure designed to carry both internal pressure and vehicle structural loads
EXAMPLE Launch vehicle main propellant tank, crew cabins, manned modules.

1245 *pressurized system*

ISO 14623:2003 2.49 TC20/SC14/WG1

1568 system which consists of pressure vessels, or pressurized structures, or both, and other pressure component such as lines, fittings, valves and bellows, which are exposed to, and structurally designed largely by, the acting pressure
NOTE Electrical or other control devices required for system operations are covered by this term.

1246 *pre-start consumption*

ISO 17540:2016 2.7 General parameters and performance of engine 2.7.4 TC20/SC14/WG2

1569 propellant mass consumption during the time interval from the first start command until the thrust build-up to a specified value equal to 5 % of the nominal

1247 *preventive action*

	ISO 10795:2019	3.169	TC20/SC14/WG5

1570 action (3.9) to eliminate the cause (3.35) of a potential nonconformity (3.157) or other potential undesirable situation
Note 1 to entry: There can be more than one cause for a potential nonconformity.
Note 2 to entry: Preventive action is taken to prevent occurrence whereas corrective action (3.68) is taken to prevent recurrence.
[SOURCE: ISO 9000:2015, 3.12.1].

1248 *preventive maintenance*

	ISO 26870:2009	3.15	TC20/SC14/WG3

1571 activities required to maintain an item in a satisfactory operating condition

1249 *primary arc*

	ISO 11221:2011	2.19	TC20/SC14/WG4

1572 primary arc (preferred term)
trigger arc (admitted term)

developed phase of a primary discharge, under an inverted potential gradient, which is associated with cathodic spot formation at a metallic or semiconductor surface

1250 *primary discharge*

	ISO 11221:2011	2.20	TC20/SC14/WG4

1573 initial electrostatic discharge which, by creating a conductive path, can trigger a secondary arc
See Figure 1 in standard.
NOTE The current can include blow-off current and surface flashover current.

1251 *primary explosive*

	ISO 26871:2012	3.1.30	TC20/SC14/WG1

1574 substance or mixture of substances used to initiate a detonation or burning reaction
NOTE In their intended role, these materials are sensitive to a range of thermal, mechanical and electrical stimuli, including exposures during processing.

1252 *primary factors*

	ISO 17851:2016	3.3 Terms related to space environment factors affecting spacecrafts 3.3.1	TC20/SC14/WG4

1575 factors existing in space and affecting spacecraft (i.e. space environment components)
- vacuum
- neutral particles of the Earth’s upper atmosphere (including atomic oxygen)
- plasma (cold plasma with particle energy up to 10 eV, hot plasma with particle energy of 10 eV to 105 eV)
- solar electromagnetic radiation: X-rays, vacuum ultraviolet radiation, ultraviolet radiation, visible light, infrared radiation
- charged particles of high energy: Earth’s radiation belts, solar energetic particles, galactic cosmic rays
- meteoroids (micrometeoroids), ejecta (for Moon), lunar dust
- space debris (microparticles)

1253 *primary failed component*

ISO 16159:2012	2.6	TC20/SC14/WG3

1576 component, the failure of which resulted in the compromised functionality of the component itself, of additional components or of the associated facility, system or equipment

1254 *primary inspection*

ISO 10830:2011	3.9	TC20/SC14/WG6

1577 first of two inspection stages in which scanning is conducted using a relatively large scanning pitch, which corresponds to relatively large apparent widths of beam spread, and at a relatively high level of sensitivity
NOTE This stage identifies suspicious spots to be inspected in the secondary inspection.

1255 *primary pipeline*

ISO 17540:2016	2.51 Stand system elements 2.51.8	TC20/SC14/WG2

1578 stand pipeline (2.51.6) from the stand tank (2.51.1)

1256 *primary spacecraft*

ISO 26869:2012	3.1.1	TC20/SC14/WG2

1579 main payload of the launch operation

1257 *primary structure*

ISO 10786:2011	3.44	TC20/SC14/WG1

1580 part of a structure that carries the main flight loads and defines the overall stiffness of the structure, thus influencing its natural frequencies and mode shapes

ISO 16454:2007	3.24	TC20/SC14/WG1

1581 part of a vehicle that carries the main loads and/or defines the fundamental resonance frequencies

1258 *primer*

ISO 16691:2014	3.1.11	TC20/SC14/WG6

1582 paint that has been formulated for use as a priming coat on prepared surfaces

1259 *priming coat*

ISO 16691:2014	3.1.12	TC20/SC14/WG6

1583 first coat of a coating system

1260 *Probability*

ISO 11231:2019	3.1.3	TC20/SC14/WG5

1584 probability of occurrence or measure for the occurrence rate or frequency of an event, a hazard scenario or consequence

1261 *probability of failure-free operation*

	ISO 17540:2016	2.44 Engine reliability index 2.44.2	TC20/SC14/WG2

1585 probability of an engine operable state when operated at all operational stages at specified operating conditions

1262 *probability of failure-free work*

	ISO 17540:2016	2.44 Engine reliability index 2.44.1	TC20/SC14/WG2

1586 probability of an engine operable state during work at operating conditions

1263 *probability of occurrence*

	ISO 17546:2016	3.29	TC20/SC14/WG1

1587 theoretical distribution that measure of how likely it is that some event shall occur [7]

[7] MIL-STD-810. DEPARTMENT OF DEFENSE TEST METHOD STANDARD ENVIRONMENTAL ENGINEERING CONSIDERATIONS AND LABORATORY TESTS”.

1264 *probability of successful disposal*

	ISO 24113:2019	3.20	TC20/SC14/WG7

1588 probability that a spacecraft (3.25) or launch vehicle orbital stage (3.13) is able to complete all of the actions associated with its disposal (3.5)
Note 1 to entry: The calculation of this probability includes consideration of uncertainties in the availability of resources, such as propellant, required for the disposal.
Note 2 to entry: The calculation of this probability can include consideration of the inherent reliabilities of subsystems that are necessary to conduct the disposal, monitoring of those subsystems, and operational remediation of any observed subsystem degradation or failure.
Note 3 to entry: The calculation of this probability can include an assessment of the risk that a space debris (3.23) or meteoroid impact will prevent the disposal, but this is not mandatory.
Note 4 to entry: In the previous edition of this document, ISO 24113:2011, the probability of successful disposal was defined as a conditional probability, i.e. the probability of successfully performing a disposal given that the nominal mission (3.15) had been completed. In this document the probability is no longer conditional.

1265 *probability reference frame*

	ISO 11231:2019	3.1.4	TC20/SC14/WG5

1589 relative indicator against which the probability (3.1.3) is expressed
Note 1 to entry: The probability reference frame is linked to the structure of the analysis. A typical reference frame in use in space projects is “per mission”.

1266 *procedure*

	ISO 10795:2019	3.170	TC20/SC14/WG5

1590 specified way to carry out an activity or a process (3.171)
Note 1 to entry: Procedures can be documented or not.
[SOURCE: ISO 9000:2015, 3.4.5]

	ISO 17566:2011	2.4	TC20/SC14/WG2

1591 specified way of carrying out an activity or a process

1267 *process*

	ISO 10794:2018	3.5	TC20/SC14/WG5
1592	set of interrelated or interacting activities that transforms inputs into outputs Note 1 to entry: See ISO 9000. Note 2 to entry: In this document, “process” means the manufacturing process of product, i.e. set of interrelated resources and activities which transforms a material or semi-finished product into a semi-finished product or final product.		
	ISO 10795:2019	3.171	TC20/SC14/WG5
1593	set of interrelated or interacting activities that use inputs to deliver an intended result Note 1 to entry: Whether the “intended result” of a process is called output, product (3.173) or service depends on the context of the reference. Note 2 to entry: Inputs to a process are generally the outputs of other processes and outputs of a process are generally the inputs to other processes. Note 3 to entry: Two or more interrelated and interacting processes in series can also be referred to as a process. Note 4 to entry: Processes in an organization (3.163) are generally planned and carried out under controlled conditions to add value. Note 5 to entry: A process where the conformity (3.60) of the resulting output cannot be readily or economically validated is frequently referred to as a “special process”. Note 6 to entry: This constitutes one of the common terms and core definitions for ISO management system (3.147) standards (3.228) given in Annex SL of the Consolidated ISO Supplement to the ISO/IEC Directives, Part 1. The original definition has been modified to prevent circularity between process and output, and Notes 1 to 5 to entry have been added. [SOURCE: ISO 9000:2015, 3.4.1]		
	ISO 16091:2018	3.1.13	TC20/SC14/WG5
1594	set of interrelated or interacting activities that use inputs to deliver an intended result Note 1 to entry: Whether the “intended result” of a process is called output, product or service, depends on the context of the reference. Note 2 to entry: Inputs to a process are generally outputs of other processes and outputs of a process are generally the inputs to other processes. Note 3 to entry: Two or more interrelated and interacting processes in series can also be referred to as a process. Note 4 to entry: Processes in an organization are generally planned and carried out under controlled conditions to add value. Note 5 to entry: A process where the conformity of the resulting output cannot be readily or economically validated is frequently referred to as a “special process”. Note 6 to entry: This constitutes one of the common terms and core definitions for ISO management system standards given in Annex SL of the Consolidated ISO Supplement to the ISO/IEC Directives, Part 1. The original definition has been modified to prevent circularity between process and output, and Notes 1 to 5 to entry have been added. [SOURCE: ISO 9000:2015, 3.4.1]		
	ISO 16290:2013	2.15	TC20/SC14/WG5
1595	set of interrelated or interacting activities which transform inputs into outputs Note 1 to entry: Inputs to a process are generally outputs of other processes. Note 2 to entry: Processes in an organization are generally planned and carried out under controlled conditions to add value. Note 3 to entry: A process where the conformity of the resulting product cannot be readily economically verified is frequently referred to as a “special process”. [SOURCE: ISO 10795, definition 1.160]		
	ISO 17566:2011	2.5	TC20/SC14/WG2
1596	set of interrelated or interacting activities which transforms inputs into outputs		

	ISO 18676:2017	3.4	TC20/SC14/WG5

1597 set of interrelated or interacting activities that use inputs to deliver an intended result
[SOURCE: ISO 9000:2015, 3.4.1]

1268 *procurement document*

	ISO 10795:2019	3.172	TC20/SC14/WG5

1598 document (3.88) such as a purchase order, subcontract (3.230), statement of work (3.229), technical specifications (3.238), and interoperate work order required to define articles, materials (3.148) and services being procured and the terms and conditions imposed

1269 *procurement responsible*

	ISO 14621-2:2019	3.1.4	TC20/SC14/WG5

1599 party accountable for the process of procuring an EEE part (3.1.3)
EXAMPLE Customer (3.1.1), supplier (3.1.6), or independent procurement agent.

1270 *procuring activity*

	ISO 14302:2002	3.1.14	TC20/SC14/WG1

1600 agency or organization funding or administering a contract for the development of the space system

1271 *product*

	ISO 10795:2019	3.173	TC20/SC14/WG5

1601 output of an organization (3.163) that can be produced without any transaction taking place between the organization and the customer (3.78)
Note 1 to entry: Production of a product is achieved without any transaction necessarily taking place between provider and customer, but can often involve this service element upon its delivery to the customer.
Note 2 to entry: The dominant element of a product is that it is generally tangible.
Note 3 to entry: Hardware (3.119) is tangible and its amount is a countable characteristic (3.41) (e.g. tyres). Processed materials (3.148) are tangible and their amount is a continuous characteristic (e.g. fuel and soft drinks). Hardware and processed materials are often referred to as goods. Software (3.217) consists of information regardless of delivery medium (e.g. computer programme (3.177), mobile phone app, instruction manual, dictionary content, musical composition copyright, driver's license).
[SOURCE: ISO 9000:2015, 3.7.6].

	ISO 14711:2003	2.5	TC20/SC14/WG3

1602 process, document, software tool, workstation, facility, procedure, or training aid that the operations organization develops to support their operation of the space system

1272 *product assurance*

	ISO 10795:2019	3.174	TC20/SC14/WG5

1603 discipline devoted to the study, planning and implementation of activities intended to assure that the design (3.82, 3.83), controls, methods, and techniques in a project (3.178) result in a satisfactory degree of quality (3.188) in a product (3.173)
[SOURCE: ISO 14300-2:2011, 3.1.1]

ISO 14300-2:2011 3.1.1 TC20/SC14/WG5

1604 discipline devoted to the study, planning and implementation of activities intended to ensure that the design, controls, methods and techniques in a programme result in a satisfactory level of quality in a product

1273 *product characteristic*

ISO 19826:2017 3.6 TC20/SC14/WG5

1605 distinguishing feature of a product
Note 1 to entry: Product characteristics can be classified variously, including physical, sensory, functional and so on. In this document, according to the severity of consequences caused by characteristic faults and non-conformance with design requirements, product characteristics are mainly divided into three categories: critical, major and minor.

1274 *product heritage*

ISO 21350:2007 3.2 TC20/SC14/WG5

1606 collection of data supporting adequacy for the intended use by time in service, number of units in service, mean time between failures (MTBF) performance, failure history, number of use cycles and manufacturing characteristics

1275 *product lifecycle*

ISO 16404:2013 3.2 TC20/SC14/WG5

1607 description of all stages of the product throughout its life starting from the expression of its need until the disposal, whatever the form is

1276 *product specification*

ISO 14621-1:2019 3.1.6 TC20/SC14/WG5

1608 document that defines the end item(s) the supplier intends to provide to satisfy all the performance specification (3.1.5) requirements

ISO 24637:2009 3.1.4 TC20/SC14/WG1

1609 equipment under test functional minimum performance requirements with associated accuracy parameters

1277 *product state*

ISO 10795:2019 3.175 TC20/SC14/WG5

1610 particular configuration (3.50) of the product (3.173) related to the current configuration baseline (3.51)

1278 *product tree*

ISO 10795:2019 3.176 TC20/SC14/WG5

1611 hierarchical structure depicting the product (3.173) orientated breakdown of the project (3.178) into successive levels of detail down to the configuration items (3.55) necessary to deliver the required functions (3.110)

1279 *product unit-value/criticality categories*

	ISO/TS 18667:2018	3.1.9	TC20/SC14/WG5

1612 five pre-defined categories of products where Category 1 is the lowest value product group and Category 5 is the highest value product group
Note 1 to entry: See Figure D.1.

1280 *product verification*

	ISO 16404:2013	3.3	TC20/SC14/WG5

1613 evaluation of the implementation of the product against the requirements to determine that they have been met
Note 1 to entry: This is compliant with ISO 9001 Verification.

1281 *production documentation*

	ISO 16159:2012	2.12	TC20/SC14/WG3

1614 documentation created by the facility, system or equipment contractor, which establishes the requirements for construction, fabrication, manufacture or purchase of the facility, system, equipment or component

1282 *programmable logic device*

PLD	**ISO 18257:2016**	3.1	TC20/SC14/WG1

1615 hardware-programmable device
EXAMPLE FPGA, CPLD, etc.

1283 *programme*

	ISO 10795:2019	3.177	TC20/SC14/WG5

1616 group of projects (3.178) managed in a coordinated way to obtain benefits not available from managing them individually
[SOURCE: ISO 14300-1:2011, 3.2]

	ISO 14300-1:2011	3.2	TC20/SC14/WG5

1617 group of projects managed in a coordinated way to obtain benefits not available from managing them individually

	ISO 16091:2018	3.1.14	TC20/SC14/WG5

1618 group of projects managed in a coordinated way to obtain benefits not available from managing them individually
[SOURCE: ISO 14300 1:2011, 3.2]

	ISO 18676:2017	3.3	TC20/SC14/WG5

1619 group of projects (3.5) managed in a coordinated way to obtain benefits not available from managing them individually
[SOURCE: ISO 10795:2011, 1.166]

	ISO 27026:2011	3.1.2	TC20/SC14/WG5

1620 strategic set of coordinated and controlled activities that has a defined architecture and/or technical approach, requirements, funding level and a management organization that often initiates and directs one or more projects

1284 *programme characteristic*

	ISO 23462:2014	2.3	TC20/SC14/WG5

1621 programme characteristic
project characteristic

description of an attribute, specific to a programme/project
Note 1 to entry: Programme/project characteristics are considered when determining management approaches to the programme/project management elements.

1285 *programme management element*

	ISO 23462:2014	2.4	TC20/SC14/WG5

1622 programme management element
project management element

part of programme/project management, relevant to the setting-up, planning and associated processes, for which the management approaches are elaborated

1286 *programme management framework*

	ISO 23462:2014	2.2	TC20/SC14/WG5

1623 programme management framework
project management framework

collection of management approaches defined for programme/project management elements
Note 1 to entry: The programme/project management framework is used as a reference basis upon which to establish programme/project management plans.

1287 *project*

	ISO 10795:2019	3.178	TC20/SC14/WG5

1624 unique process (3.171), consisting of a set of coordinated and controlled activities with start and finish dates, undertaken to achieve an objective conforming to specific requirements (3.201), including the constraints (3.61) of time, cost and resources
Note 1 to entry: An individual project can form part of a larger project structure and generally has a defined start and finish date.
Note 2 to entry: In some projects the objectives and scope are updated and the product (3.173) or service characteristics (3.41) defined progressively as the project proceeds.
Note 3 to entry: The output of a project can be one or several units (3.93) of product or service.
Note 4 to entry: The project's organization (3.163) is normally temporary and established for the lifetime (3.143) of the project.
Note 5 to entry: The complexity of the interactions among project activities is not necessarily related to the project size.
[SOURCE: ISO 9000:2015, 3.4.2]

	ISO 14300-1:2011	3.1	TC20/SC14/WG5

1625 set of coordinated and controlled activities with start and finish dates, undertaken to achieve an objective conforming to specific requirements, including the constraints of time, cost and resources
NOTE Adapted from ISO 9000:2005.

	ISO 16091:2018	3.1.15	TC20/SC14/WG5

1626 unique process, consisting of a set of coordinated and controlled activities with start and finish dates, undertaken to achieve an objective conforming to specific requirement, including the constraints of time, cost and resources
Note 1 to entry: An individual project can form part of a larger project structure and generally has a defined start and finish date.
Note 2 to entry: In some projects the objectives and scope are updated and the product or service characteristics defined progressively as the project proceeds.
Note 3 to entry: The output of a project can be one or several units of product or service.
Note 4 to entry: The project's organization is normally temporary and established for the lifetime of the project.
Note 5 to entry: The complexity of the interactions among project activities is not necessarily related to the project size.
[SOURCE: ISO 9000:2015, 3.4.2]

	ISO 18676:2017	3.5	TC20/SC14/WG5

1627 unique process (3.4), consisting of a set of coordinated and controlled activities with start and finish dates, undertaken to achieve an objective conforming to specific requirements, including the constraints of time, cost and resources
[SOURCE: ISO 9000:2015, 3.4.2]

	ISO 27026:2011	3.1.3	TC20/SC14/WG5

1628 portion of a programme consisting of a set of coordinated and controlled activities, undertaken to achieve an objective(s) of the programme conforming to specific programme requirements, including constraints of time, cost and other resources

1288 *project characteristic*

	ISO 23462:2014	2.3	TC20/SC14/WG5

1629 programme characteristic
project characteristic

description of an attribute, specific to a programme/project
Note 1 to entry: Programme/project characteristics are considered when determining management approaches to the programme/project management elements.

1289 *project data files*

	ISO 21349:2007	3.4	TC20/SC14/WG5

1630 collection of requirements, specifications, plans, technical result documentation and all other project data that serves to represent the project status

1290 *project decision authority*

	ISO 21349:2007	3.5	TC20/SC14/WG5

1631 entity with authority to certify that the preconditions for a review are met, to initiate the review process, to reach decisions on the review board recommendations and to cause the agreed project actions to be carried out

1291 *project expert*

	ISO 21349:2007	3.6	TC20/SC14/WG5

1632 person well acquainted with the project status and documentation and highly qualified in some area of the technical content of the project review

1292 *project management element*

	ISO 23462:2014	2.4	TC20/SC14/WG5

1633 programme management element
project management element

part of programme/project management, relevant to the setting-up, planning and associated processes, for which the management approaches are elaborated

1293 *project management framework*

	ISO 23462:2014	2.2	TC20/SC14/WG5

1634 programme management framework
project management framework

collection of management approaches defined for programme/project management elements
Note 1 to entry: The programme/project management framework is used as a reference basis upon which to establish programme/project management plans.

1294 *project phase*

	ISO 10795:2019	3.179	TC20/SC14/WG5

1635 part of a total project (3.178) during which activities are performed to attain a designated objective as one of a series of distinct steps in carrying out a project that together constitute the project life cycle (3.141)
[SOURCE: ISO 16091:2018, 3.1.16]

	ISO 16091:2018	3.1.16	TC20/SC14/WG5

1636 part of a total project during which activities are performed to attain a designated objective as one of a series of distinct steps in carrying out a project that together constitute the project life cycle

1295 *project requirements document*

	ISO 10795:2019	3.180	TC20/SC14/WG5

1637 document (3.88), including all normative references, that establishes requirements (3.201)
Note 1 to entry: Examples of a project requirements document include standards (3.228), management (3.146) specifications (3.227), technical specifications (3.238), statements of work and data requirement lists.
Note 2 to entry: This does not include the contract (3.65) and associated terms and conditions.
[SOURCE: ISO 16091:2018, 3.1.17, modified – the term has been changed from "project requirements documents" to "project requirements document".]

1296 *project requirements documents*

	ISO 16091:2018	3.1.17	TC20/SC14/WG5

1638 documents, including all normative references, that establish requirements
Note 1 to entry: Examples of project requirements documents include, but are not limited to, standards, management specifications, technical specifications, statements of work and data requirements lists.
Note 2 to entry: This does not include the contract and associated terms and conditions.

1297 *project review team*

	ISO 21349:2007	3.7	TC20/SC14/WG5

1639 body consisting of project experts, charged with preparing all evidence for the review and formulating responses to action items
NOTE The best practice for conducting a review involves two separate teams of experts: the project review team and the review board (3.8). The project review team is composed of persons well acquainted with the project, and is responsible for assembling information concerning the actual status of the project.

1298 *proof factor*

	ISO 10785:2011	3.23	TC20/SC14/WG1

1640 multiplying factor applied to the limit load or maximum expected operating pressure (MEOP) or maximum design pressure (MDP) [3.20] to obtain proof load or proof pressure for use in acceptance testing
[ISO 14623:2003, definition 2.50]

	ISO 10786:2011	3.45	TC20/SC14/WG1

1641 multiplying factor applied to the limit load or MEOP to obtain proof load or proof pressure for use in the acceptance testing

	ISO 14623:2003	2.50	TC20/SC14/WG1

1642 multiplying factor applied to the limit load or MEOP (or MDP) to obtain proof load or proof pressure for use in the acceptance testing

	ISO 21347:2005	3.29	TC20/SC14/WG1

1643 multiplying factor applied to the limit load or maximum expected operating pressure (or maximum design pressure) to obtain proof load or proof pressure for use in the acceptance testing

	ISO 24638:2008	3.25	TC20/SC14/WG1

1644 multiplying factor applied to the limit load or MEOP (or MAWP, MDP and MOP) to obtain proof load or proof pressure for use in the acceptance testing

1299 *proof load*

	ISO 14622:2000	2.5.8	TC20/SC14/WG1

1645 acceptance load
proof load

load applied during acceptance testing and which is equal to the limit load multiplied by an acceptance factor Jp

1300 *proof pressure*

	ISO 14622:2000	2.6.4	TC20/SC14/WG1

1646 differential pressure applied during the proof pressure test and which is equal to the limit pressure multiplied by the proof pressure factor Jp (2.5.8)

	ISO 14623:2003	2.51	TC20/SC14/WG1

1647 product of MEOP (or MDP) and a proof factor
NOTE The proof pressure is used to provide evidence of satisfactory workmanship and material quality and/or establish maximum initial flaw sizes for the safe-life demonstration of a metallic hardware item.

	ISO 24638:2008	3.26	TC20/SC14/WG1

1648 product of MEOP (or MAWP, MDP and MOP) and a proof factor
NOTE The proof pressure is used to provide evidence of satisfactory workmanship and material quality and/or to establish maximum initial flaw sizes for damage tolerance life (safe-life) demonstration

1301 *proof spin test*

	ISO 21648:2008	2.1.31	TC20/SC14/WG1

1649 spin test run on a flight flywheel module at a pre-selected spinning speed that is higher than maximum expected operating speed

1302 *proof test pressure*

	ISO 10785:2011	3.24	TC20/SC14/WG1

1650 pressure level used to give evidence of satisfactory workmanship and material quality and/or establish maximum initial flaw sizes for safe-life demonstration

1303 *propellant expansion delay*

	ISO 17540:2016	2.9 Low-thrust engine performance 2.9.17	TC20/SC14/WG2

1651 interval time from the start entry of the second component of propellant cell LTE (2.1.3) until the pressure (2.7.7) in the chamber (2.2.1) reaches a value equal to the pressure in the absence of fuel decomposition

1304 *propellant flow core*

	ISO 17540:2016	2.14 Operating process in chamber (gas generator) 2.14.6	TC20/SC14/WG2

1652 central part of propellant flow and/or gas generation products in the chamber (2.2.1) or gas generator (2.2.4) where combustion chamber walls and wall layer do not influence the operating process

1305 *propellant ignition delay*

	ISO 17540:2016	2.9 Low-thrust engine performance 2.9.18	TC20/SC14/WG2

1653 time interval from the moment the second propellant enters the chamber (2.2.1) up to ignition

1306 *propellant stand tank*

	ISO 17540:2016	2.51 Stand system elements 2.51.3	TC20/SC14/WG2

1654 starting stand tank
stand tank (2.51.1) used for propellant components storage required for engine test (2.27.1) and its operating conditions

1307 *propellants*

	ISO 14624-5:2006	3.3	TC20/SC14/WG6

1655 fluids, such as hydrazine and monomethylhydrazine, and oxidizers usually used for space projects

1308 *protected region*

	ISO 16126:2014	3.10	TC20/SC14/WG7

1656 region in space that is protected with regard to the generation of space debris to ensure its safe and sustainable use in the future
[SOURCE: ISO 24113:2011, 3.14]

	ISO 24113:2019	3.21	TC20/SC14/WG7

1657 region in outer space that is protected with regard to the generation of space debris (3.23) to ensure its safe and sustainable use in the future

1309 *protection system*

	ISO 14950:2004	3.2.19	TC20/SC14/WG3

1658 on-board function (implemented either in hardware or software) that is provided to monitor sensor or logic readings and, based on their output, either direct or processed, to:
- prevent the propagation of the failure at equipment or system level; or
- reconfigure the spacecraft system or subsystem into a “safe” configuration

NOTE Subsequent analysis and recovery action will normally be performed by the ground.

1310 *protective devices*

	ISO 17546:2016	3.30	TC20/SC14/WG1

1659 devices such as fuses, by-pass, diodes and current limiters which interrupt the current flow, block the current flow in one direction or limit the current flow in an electrical circuit [6]

[6] ST/SG/AC. 10/11/Rev.5/Amend.1, “United Nations Transport of Dangerous Goods UN Manual of Tests and Criteria, Part III, sub-section 38.3 Fifth revised edition Amendment 1”

1311 *Proto-flight level testing*

PFT	**ISO 20188:2018**	3.2	TC20/SC14/WG5

1660 test of the flight quality product subjected to the qualification levels and acceptance duration

1312 *proto-flight model*

	ISO 15864:2004	3.1.6	TC20/SC14/WG2

1661 model that is subjected to the qualification levels and acceptance duration

1313 *proton*

p+	**ISO 23038:2018**	3.8	TC20/SC14/WG1

1662 positively charged particle of mass number one, having a mass of 1,672 kg × 10⁻²7 kg and a charge equal in magnitude but of opposite sign to the electron
Note 1 to entry: A proton is the nucleus of a hydrogen atom.

1314 *protoqualification test*

	ISO 10786:2011	3.46	TC20/SC14/WG1

1663 test of the flight-quality article to a higher load level and duration than the acceptance test applied to flight units under prototype qualification strategy
NOTE The testing consists of the same types and sequences as used in qualification testing.

1315 *provision*

	ISO 10795:2019	3.181	TC20/SC14/WG5

1664 expression in the context of a normative document (3.158) that takes the form of a statement, an instruction, a recommendation or a requirement (3.201)
Note 1 to entry: These types of provision are distinguished by the form of wording employed (e.g. instructions are expressed in the imperative mood, recommendations by the use of the auxiliary “should” and requirements by the use of the auxiliary “shall”, and a choice or “permission”, by “may”).
[SOURCE: EN 45020:2006, 7.1]

1316 *pulse mode*

	ISO 17540:2016	2.11 Low-hrust engine operationmodes 2.11.2	TC20/SC14/WG2

1665 LTE operation mode of many firing (on-times (2.9.8)) where the specific impulse (2.7.16) depends on each firing (on-time)
Note 1 to entry: Minimum duration of the pulses is limited by the time taken for the thruster valves to open and close, since this limits the repeatability of the process.

1317 *pump*

	ISO 17540:2016	2.19 Turbine pump components 2.20.1	TC20/SC14/WG2

1666 engine unit for an oxidizer or a fuel supply

1318 *pump auger*

	ISO 17540:2016	2.19 Turbine pump components 2.20.2	TC20/SC14/WG2

1667 pump runner, with vanes, performed on helical surface

1319 *pump capacity characteristic*

	ISO 17540:2016	2.21 Pump characteristics 2.21.10	TC20/SC14/WG2

1668 characteristic of pump capacity on the flow rate through the pump (2.20.1) at rated conditions

1320 *pump cavitation characteristic*

	ISO 17540:2016	2.21 Pump characteristics 2.21.7	TC20/SC14/WG2

1669 dependence of pump head (2.21.2) on the pressure input in the pump (2.20.1) at rated conditions

1321 *pump cavitation stall*

	ISO 17540:2016	2.21 Pump characteristics 2.21.3	TC20/SC14/WG2

1670 sharp reduction of pump head (2.21.2) due to cavitation and stalling

1322 *pump efficiency characteristic*

	ISO 17540:2016	2.21 Pump characteristics 2.21.11	TC20/SC14/WG2

1671 characteristic of pump efficiency on flow rate through the pump (2.20.1) at rated conditions

1323 *pump head*

	ISO 17540:2016	2.21 Pump characteristics 2.21.2	TC20/SC14/WG2

1672 mechanical energy imparted to the fluid by the pump (2.20.1)

1324 *pump pressure characteristic*

	ISO 17540:2016	2.21 Pump characteristics 2.21.9	TC20/SC14/WG2

1673 characteristic of total pressure corresponding to the flow rate at rated conditions

1325 *pump stalling pressure*

	ISO 17540:2016	2.21 Pump characteristics 2.21.4	TC20/SC14/WG2

1674 total pressure at the inlet of pump (2.20.1) which may cause cavitation stall

1326 *pump throttling cavitation characteristic*

	ISO 17540:2016	2.21 Pump characteristics 2.21.8	TC20/SC14/WG2

1675 characteristic of pump stalling cavitation static suction head corresponding to the propellant flow rate

1327 *punch-through*

	ISO 11221:2011	2.21	TC20/SC14/WG4

1676 dielectric breakdown between two sides of an insulator material

1328 *purchaser*

	ISO 10795:2019	3.182	TC20/SC14/WG5

1677 customer (3.78) in a contractual situation
Note 1 to entry: The purchaser is sometimes referred to as the “business second party”.

1329 *PVT method*

	ISO 23339:2010	3.3	TC20/SC14/WG3

1678 method for determining the remaining mass of gas by deriving density in a known volume from pressure and temperature measurements
NOTE PVT: pressure, volume, temperature.

1330 *pyranometer*

	ISO 15387:2005	3.24	TC20/SC14/WG1

1679 radiometer normally used to measure global sunlight irradiance on a horizontal plane
NOTE A pyranometer can also be used at an angle to measure the total sunlight irradiance on an inclined plane, which in this case includes an element caused by radiation reflected from the foreground.

1331 *pyrheliometer*

	ISO 15387:2005	3.25	TC20/SC14/WG1

1680 radiometer, complete with a collimator, used to measure direct sunlight irradiance
NOTE This instrument is sometimes called normal incidence pyrheliometer, or NIP.

1332 *pyrotechnic device*

	ISO 26871:2012	3.1.31	TC20/SC14/WG1

1681 device or assembly containing, or actuated by, propellants or explosives, with the exception of large rocket motors
NOTE Initiators, igniters, detonators, squibs, safe and arm devices, booster cartridges, pressure cartridges, separation bolts and nuts, pin pullers, linear separation systems, shaped charges, explosive guillotines, pyrovalves, detonation transfer assemblies (mild detonating fuse, confined detonating cord, confined detonating fuse, shielded mild detonating cord, etc.), through-bulkhead initiators, mortars, thrusters, explosive circuit interrupters, and other similar items.

1333 *qualification*

	ISO 10795:2019	3.183	TC20/SC14/WG5

1682 act or conduct by the supplier (3.232) to provide evidences to prove that design (3.82, 3.83) and manufacturing (including manufacturing process (3.171)) of hardware (3.119)/software (3.217) is adequate to fulfil all requirements (3.201) under required environment (3.92) conditions
Note 1 to entry: This may be implemented by analysis (3.12), test (3.239), inspection (3.127), or demonstration.

	ISO 16404:2013	3.4	TC20/SC14/WG5

1683 act or conduct of the supplier to provide evidences to prove that the design and manufacturing (including manufacturing process) of hardware/software is adequate to fulfil all requirements under required environment conditions
Note 1 to entry: This may be implemented by analysis, test, inspection, or demonstration of a set of tasks that provide proofs, while basing on theoretical and experimental justifications that the defined product satisfies the specified need and can be produced.
Note 2 to entry: The qualification decision is the act by which the customer, at the origin of the technical specification, attests on the basis of theoretical and experimental justifications that the defined product, identified by the design data file, meets all the requirements of the technical specification and can be produced.

1334 *qualification envelope*

	ISO 26871:2012	3.1.32	TC20/SC14/WG1

1684 positive margin over the conditions of the operational envelope

1335 *qualification load*

	ISO 14622:2000	2.5.9	TC20/SC14/WG1

1685 load applied during the qualification tests and which is borne by the structure without failure or collapse

1336 *Qualification Model*

	ISO 10795:2019	3.184	TC20/SC14/WG5

1686 model (3.155), which fully reflects all aspects of the flight model design (3.82, 3.83), used for complete functional and environmental qualification (3.183) testing
[SOURCE: EN 16601-00-01:2015, 2.3.165]

	ISO 15864:2004	3.1.7	TC20/SC14/WG2

1687 spacecraft, subsystem, or unit dedicated to qualifying the design of flight model and subjected to qualification testing

1337 *qualification process*

	ISO 10795:2019	3.185	TC20/SC14/WG5

1688 process (3.171) that covers all the verification (3.244) activities including all the items (3.134) of the product (3.173) (component (3.48), equipment (3.93), subsystem (3.231) and system (3.234))
[SOURCE: ISO 15865:2005, 3.1.1]

	ISO 15865:2005	3.1.1	TC20/SC14/WG5

1689 process that covers all the verification activities including all the items of the product (component, equipment, subsystem and system)

1338 *qualification review*

QR	**ISO 10795:2019**	3.186	TC20/SC14/WG5

1690 review (3.203) that aims to
– achieve qualification (3.183) of the products (3.173) as well as associated production means,
– authorise the production of the recurring products
Note 1 to entry: The achievement of technical qualification of the product elements is on the basis of the following documents (3.88):
– complete design (3.82, 3.83) justification file for the system (3.234) including ground element;
– qualification reports;
– finalized user's documentation (3.89), including installation, utilisation, operations, and maintenance (3.145) manuals.

1339 *qualification test*

	ISO 10785:2011	3.25	TC20/SC14/WG1

1691 required formal contractual tests conducted at load levels and durations in order to demonstrate that the design, manufacturing, and assembly of flight-quality structures have resulted in hardware that conforms to specification requirements
NOTE In addition, the qualification test may validate the planned acceptance programme, including test techniques, procedures, equipment, instrumentation, and software.

	ISO 10786:2011	3.47	TC20/SC14/WG1

1692 required formal contractual test conducted at load levels and durations to demonstrate that the design, manufacturing, and assembly of flight-quality structures have resulted in hardware that conforms to specification requirements
NOTE In addition, the qualification test may validate the planned acceptance progamme including test techniques, procedures, equipment, instrumentation, and software.

	ISO 10795:2019	3.187	TC20/SC14/WG5

1693 required formal contractual test (3.239) used to demonstrate that the design (3.82, 3.83), manufacturing, and assembly (3.23) have resulted in hardware (3.119) designs conforming to specification (3.227) requirements (3.201)
[SOURCE: ISO 14623:2003, 2.52, modified – the term has been changed from "qualification tests" to "qualification test".]

	ISO 17540:2016	2.34 Types of engine tests: Test purposes 2.34.5	TC20/SC14/WG2

1694 engine firing test before start or renewal of a serial production for the purpose of confirming manufacturer availability to produce engines in compliance with the design documentation requirements

1340 *qualification tests*

	ISO 14623:2003	2.52	TC20/SC14/WG1

1695 required formal contractual tests used to demonstrate that the design, manufacturing, and assembly have resulted in hardware designs conforming to specification requirements

	ISO 21648:2008	2.1.32	TC20/SC14/WG1

1696 required formal tests used to demonstrate that the design, manufacturing and assembly have resulted in hardware conforming to specification requirements
NOTE Qualification test is synonymous with certification test.

	ISO 24917:2010	3.31	TC20/SC14/WG2

1697 required formal contractual tests used to demonstrate that the design, manufacturing, and assembly have resulted in hardware designs conforming to specification requirements
[ISO 14623:2003, definition 2.52]

1341 *qualified technical personnel*

	ISO 22538-1:2007	3.1.4	TC20/SC14/WG6

1698 persons such as engineers and chemists who, by virtue of education, training or experience, know how to apply physical and chemical principles involved in the reactions between oxygen and other materials

	ISO 22538-5:2010	2.1.2	TC20/SC14/WG6

1699 person who, by virtue of education, training or experience, knows how to apply physical and chemical principles involved in the reactions between oxygen and other materials
EXAMPLE Engineers, chemists.

1342 *quality*

	ISO 10795:2019	3.188	TC20/SC14/WG5

1700 degree to which a set of inherent characteristics (3.41) of an object fulfils requirements (3.201)
Note 1 to entry: The term “quality” can be used with adjectives such as poor, good or excellent.
Note 2 to entry: “Inherent”, as opposed to “assigned”, means existing in the object.
[SOURCE: ISO 9000:2015, 3.6.2]

1343 *quality assurance*

QA	**ISO 10795:2019**	3.189	TC20/SC14/WG5

1701 part of quality (3.188) management (3.146) focused on providing confidence that quality requirements (3.201) will be fulfilled
[SOURCE: ISO 9000:2015, 3.3.6]

1344 *quality characteristic*

	ISO 10795:2019	3.190	TC20/SC14/WG5

1702 inherent characteristic (3.41) of an object related to a requirement (3.201)
Note 1 to entry: Inherent means existing in something, especially as a permanent characteristic.
Note 2 to entry: A characteristic assigned to an object (e.g. the price of an object) is not a quality characteristic of that object.
[SOURCE: ISO 9000:2015, 3.10.2]

1345 *quality control*

	ISO 10795:2019	3.191	TC20/SC14/WG5

1703 part of quality (3.188) management (3.146) focused on fulfilling quality requirements (3.201)
[SOURCE: ISO 9000:2015, 3.3.7]

1346 *quality improvement*

ISO 10795:2019 3.192 TC20/SC14/WG5

1704 part of quality (3.188) management (3.146) focused on increasing the ability to fulfil quality requirements (3.201)
Note 1 to entry: The quality requirements can be related to any aspect such as effectiveness, efficiency or traceability (3.240).
[SOURCE: ISO 9000:2015, 3.3.8]

1347 *quality plan*

ISO 10795:2019 3.193 TC20/SC14/WG5

1705 specification (3.227) of the procedures (3.170) and associated resources to be applied when and by whom to a specific object
Note 1 to entry: These procedures generally include those referring to quality (3.188) management (3.146) processes (3.171) and to product (3.173) and service realization processes.
Note 2 to entry: A quality plan often makes reference to parts of the quality manual or to procedure documents (3.88).
Note 3 to entry: A quality plan is generally one of the results of quality planning.
[SOURCE: ISO 9000:2015, 3.8.9]

1348 *quality representative*

ISO 18322:2017 3.3 TC20/SC14/WG2

1706 representative from the space test centre management with designated responsibility for quality management
Note 1 to entry: In the context of test centres

1349 *quasi-static load*

ISO 10786:2011 3.67 TC20/SC14/WG1

1707 static load (admitted term)
quasi-static load (preferred term)

load which is independent of time or are varying slowly with time, so that the dynamic response of the structure is insignificant
NOTE Quasi-static loads comprise both static and dynamic loads and are applied at a frequency sufficiently below the natural frequency of the considered part, thus being equivalent to static loads in their effects on the structure.

ISO 14622:2000 2.5.1 TC20/SC14/WG1

1708 static load
quasi-static load

load whose magnitude and direction are independent of time, or load which vary slowly and for which the dynamic response of the structure is not significant
NOTE This load can be induced by:
- steady winds;
- aerodynamic forces;
- thrust (constant or with slow variations);
- manoeuvres;
- spin stabilization.

ISO 15864:2004 3.1.8 TC20/SC14/WG2

1709 load with magnitude and direction that are independent of time; or load that varies slowly and in which dynamic response of the structure is insignificant
NOTE This load can be induced by steady wind, aerodynamic forces, thrust (constant or wind slow variations), maneuvers and spin stabilization.

1350 *R12*

ISO 16457:2014	2.7	TC20/SC14/WG4

1710 12-month running mean of monthly sunspot number

1351 *radiant flux*

ISO 16378:2013	3.8	TC20/SC14/WG6

1711 $\Phi = dQ/dt$ [W]
where dQ is the radiant energy emitted, transferred, or received during a time interval of the duration dt
[SOURCE: ISO 80000-7]

1352 *radiation action measure*

ISO 15856:2010	3.1.14	TC20/SC14/WG4

1712 energetic characteristic of radiation action on a material
NOTE The radiation action measure for non-metallic materials is an absorbed dose or energy fluence.

1353 *radiation belt*

ISO 15856:2010	3.1.15	TC20/SC14/WG4

1713 electrons and protons trapped by the geomagnetic (planetary magnetic) field

1354 *radiation cooling*

ISO 17540:2016	2.25 Engine cooling 2.25.5	TC20/SC14/WG2

1714 engine external cooling performed by heat emission to the environment

1355 *radiation scale effect*

ISO 15856:2010	3.1.16	TC20/SC14/WG4

1715 dependence of the material degradation on the thickness ratio of irradiated and unirradiated layers

1356 *radio frequency interference*

RFI	**ISO 14302:2002**	3.1.15	TC20/SC14/WG1

1716 degradation of the reception of a wanted signal caused by a radio frequency disturbance

1357 *radio-thermal engine*

ISO 17540:2016	2.6 Low-thrust engine types by way of work process 2.6.7	TC20/SC14/WG2

1717 thermal LTE using a radioactive energy source

1358 *radio-thermo-catalytic engine*

	ISO 17540:2016	2.6 Low-thrust engine types by way of work process 2.6.4	TC20/SC14/WG2

1718 thermo-catalytic LTE using a radioactive source of energy

1359 *ram*

	ISO 11221:2011	2.22	TC20/SC14/WG4

1719 space in front of and adjacent to a spacecraft in which the plasma density can be enhanced by the motion of the spacecraft

1360 *random load*

	ISO 10786:2011	3.48	TC20/SC14/WG1

1720 vibrating load or fluctuating load whose instantaneous magnitudes are specified only by probability distribution functions giving the probable fraction of the total time that the instantaneous magnitude lies within a specified range
NOTE A random load contains non-periodic or quasi-periodic constituents.

1361 *Random Test*

	ISO 17540:2016	2.34 Types of engine tests: Test purposes 2.34.8	TC20/SC14/WG2

1721 check test of one engine selected from those made within a set time of production
Note 1 to entry: A random test may be acceptance or periodic (periodic confirmation, special periodic).

1362 *range tracking system*

	ISO 14620-3:2005	3.4	TC20/SC14/WG5

1722 combination of flight-, ground- or space-based hardware and software designed, installed and/or operated specifically for tracking a launch vehicle

1363 *rated conditions of pump operation*

	ISO 17540:2016	2.21 Pump characteristics 2.21.6	TC20/SC14/WG2

1723 set of conditions defined by standard value of the temperature, inlet pressure, flow rate, density of propellant and pump rotating speed that are specified in the design

1364 *rated current*

	ISO 15387:2005	3.26	TC20/SC14/WG1

1724 assigned value of current of a solar cell at the rated voltage under specified operating conditions

1365 *rated operation mode*

	ISO 17540:2016	2.18 Nozzle operation modes 2.18.1	TC20/SC14/WG2

1725 nozzle operating mode when gas pressure at the exit section is equal to the environment pressure

1366 *rated performance*

	ISO 17540:2016	2.7 General parameters and performance of engine 2.7.1	TC20/SC14/WG2

1726 set of nominal values of the engine designated in the specifications

1367 *rated power*

	ISO 15387:2005	3.27	TC20/SC14/WG1

1727 assigned value of power output of a solar cell at rated voltage under specified operating conditions

1368 *rated thrust*

	ISO 17540:2016	2.9 Low-thrust engine performance 2.9.6	TC20/SC14/WG2

1728 designed thrust level in a steady-state condition mode under nominal working conditions

1369 *rated voltage*

	ISO 15387:2005	3.28	TC20/SC14/WG1

1729 assigned value of voltage under specified operating conditions

1370 *reaction*

	ISO 14624-5:2006	3.4	TC20/SC14/WG6

1730 chemical change in which a substance decomposes, combines with other substances, or interchanges constituents with other substances

	ISO 14624-6:2006	3.7	TC20/SC14/WG6

1731 chemical change in which a substance decomposes, combines with other substances, or interchanges constituents with other substances

	ISO 14624-7:2006	3.3	TC20/SC14/WG6

1732 chemical change in which a substance decomposes, combines with other substances, or interchanges constituents with other substances

1371 *real-time simulation*

	ISO 16781:2013	2.7	TC20/SC14/WG1

1733 kind of simulation, in which the time scale of dynamic process in simulation model strictly equals to that of the real system

1372 *reasonable foreseeable misuse*

ISO 17546:2016 3.31 TC20/SC14/WG1

1734 use of a product, process or service in the way which is not intended by the supplier, but which results form readily predictable human behaviour [9]

[9] IEC 62133, Secondary cells and batteries containing alkaline or other non-acid electrolytes -
Safety requirements for portable sealed secondary cells, and for batteries made from them, for use
in portable applications

1373 *record*

ISO 10795:2019 3.194 TC20/SC14/WG5

1735 document (3.88) stating results achieved or providing evidence of activities performed
Note 1 to entry: Records can be used, for example, to formalize traceability (3.240) and to provide evidence of verification (3.244), preventive action (3.169) and corrective action (3.68).
Note 2 to entry: Generally records need not be under revision control.
[SOURCE: ISO 9000:2015, 3.8.10]

1374 *recovered mass loss*

RML **ISO 15388:2012** 3.1.42 TC20/SC14/WG6

1736 total mass loss of the specimen without the sorbed water:
RML = TML − WVR
where
TML is the total mass loss;
WVR is the water vapour regained
NOTE The quantity RML is introduced because water is not a critical contaminant for some space systems (see 5.6.3). In most cases, the value of WVR is similar to that of the mass of outgassed water. However, WVR is not exactly the same as the water mass effused from the specimen. Therefore, RML is not equal to the real value of the mass loss other than water.

1375 *recurrent cost*

ISO 10795:2019 3.195 TC20/SC14/WG5

1737 costs incurred for each additional, identical item (3.134) produced

1376 *redundancy*

ISO 10795:2019 3.196 TC20/SC14/WG5

1738 <design property of a system> existence of more than one means for performing a function (3.110)
Note 1 to entry: The additional means of performing the function may be intentionally different (diverse) to reduce the potential for common mode failures (3.98).

1377 *re-entry*

ISO 10795:2019 3.197 TC20/SC14/WG5

1739 return of a spacecraft (3.224) or other space object into the Earth’s atmosphere
Note 1 to entry: Several alternative definitions are available for the boundary between the Earth’s atmosphere and outer space.

	ISO 16126:2014	3.11	TC20/SC14/WG7

1740 process in which atmospheric drag cascades deceleration of a spacecraft (or any part thereof), leading to its destruction or return to Earth
[SOURCE: ISO 24113:2011, 3.15, modified]

	ISO 24113:2019	3.22	TC20/SC14/WG7

1741 permanent return of a space object (3.24) into the Earth's atmosphere
Note 1 to entry: Several alternative definitions are available for the delineation of a boundary between the Earth's atmosphere and outer space.

1378 *reference atmospheres*

	ISO/TR 11225:2012	3.1	TC20/SC14/WG4

1742 vertical temperature profiles for each latitude and season; atmosphere models for specific geographical locations or globally

1379 *reflectance*

ρ	**ISO 16378:2013**	3.9	TC20/SC14/WG6

1743 ρ = Φr/Φm
where Φr is the reflected radiant flux or the reflected luminous flux and Φm is the radiant flux or luminous flux of the incident radiation
[SOURCE: ISO 80000-7]

1380 *refurbishment*

	ISO 10785:2011	3.27	TC20/SC14/WG1

1744 renovation and restoration to intended use condition

1381 *regenerative cooling*

	ISO 17540:2016	2.25 Engine cooling 2.25.4	TC20/SC14/WG2

1745 engine one-through cooling where removed heat is transmitted to fuel components

1382 *regolith*

	ISO 10788:2014	2.1.9	TC20/SC14/WG4

1746 all participate surface material including rocks, soils, and dust
Note 1 to entry: As stated in the Introduction, this International Standard is limited in scope to regolith 10 cm and smaller. Rocks, soils, and dust are not differentiated on the basis of size.

1383 *relative flow rate tension of chamber*

	ISO 17540:2016	2.14 Operating process in chamber (gas generator) 2.14.9	TC20/SC14/WG2

1747 <gas generator> ratio of flow rate tension (2.14.7) to the pressure (2.7.8) in the chamber (2.2.1) (gas generator)

1384 *relative mass*

	ISO 17540:2016	2.7 General parameters and performance of engine 2.7.31	TC20/SC14/WG2

1748 ratio of the wet mass (2.7.30) to the maximum thrust on the main steady-state operation

1385 *relative motion analysis*

	ISO 16679:2015	3.2	TC20/SC14/WG3

1749 analysis to predict the relative distance of spacecraft(s) to objects (end stage of LV and others generated during the separation) after the LV/SC separation

1386 *relative spectral response*

S(λ)rel	**ISO 15387:2005**	3.29	TC20/SC14/WG1

1750 spectral response normalized to unity at wavelength of maximum response
NOTE S(λ)rel = S(λ)/S(λ)max

1387 *relevant environment*

	ISO 16290:2013	2.16	TC20/SC14/WG5

1751 minimum subset of the operational environment (2.11) that is required to demonstrate critical functions of the element (2.2) performance in its operational environment (2.11)

1388 *reliability*

	ISO 10795:2019	3.198	TC20/SC14/WG5

1752 ability of an item (3.134) to perform a required function (3.110) under given conditions for a given time interval
Note 1 to entry: It is generally assumed that the item is in a state to perform this required function at the beginning of the time interval.
Note 2 to entry: Generally, reliability performance (3.166) is quantified using appropriate measures. In some applications these measures include an expression of reliability performance as a probability, which is also called reliability.
[SOURCE: EN 16601-00-01:2015, 2.3.170, modified – The article “the” has been removed from the definition for consistency with ISO/IEC Directives Part 2, 2018 edition.]

	ISO 16781:2013	2.8	TC20/SC14/WG1

1753 ability of an item to perform a required function under given conditions for a given time interval
[SOURCE: ISO 10795:2011]

1389 *reliability assurance programme*

	ISO 24917:2010	3.19	TC20/SC14/WG2

1754 programme document specifying a set of requirements and measures aimed at providing and controlling the satisfaction of requirements established for the statement of work for a space launch vehicle and its components reliability during their development

1390 *reliability engineering*

	ISO 14621-1:2019	3.1.7	TC20/SC14/WG5

1755 integral part of the system engineering requirements definition and analysis function
Note 1 to entry: The tasks are to conduct cost/benefit trade-offs and to analyse and determine alternative design and procurement solutions.

1391 *remaining usable propellant*

	ISO 23339:2010	3.4	TC20/SC14/WG3

1756 propellant that remains in the propellant system and that is effective for attitude and orbit control manoeuvres

1392 *remnant magnetic field*

	ISO 21494:2019	3.5	TC20/SC14/WG2

1757 magnetic field produced by the remnant magnetic moment of the EUT as measured at a distance from the magnetic moment location and falls off as the inverse cube of the distance from the magnetic moment location

1393 *remnant magnetic moment*

	ISO 21494:2019	3.2	TC20/SC14/WG2

1758 magnetic moment of the EUT in a zero-magnetic field environment when the EUT is not in a powered on operational mode, that is mostly due to the residual magnetic fields from spacecraft materials

1394 *re-orbit manoeuvre*

	ISO 26872:2019	3.2	TC20/SC14/WG3

1759 action of moving a spacecraft (3.4) to a new orbit

1395 *repair*

	ISO 10785:2011	3.26	TC20/SC14/WG1

1760 action on a nonconforming product to make it acceptable for the intended use
NOTE 1 Repair includes remedial action taken on previously conforming product to restore it for use, for example as part of maintenance.
NOTE 2 Unlike rework, repair can affect or change parts of the nonconforming product.

	ISO 10795:2019	3.199	TC20/SC14/WG5

1761 action (3.9) on a nonconforming product (3.173) or service to make it acceptable for the intended use
Note 1 to entry: A successful repair of a nonconforming product or service does not necessarily make the product or service conform to the requirement (3.201). It can be that in conjunction with a repair a concession (3.49) is required.
Note 2 to entry: Repair includes remedial action taken on a previously conforming product or service to restore it for use, for example as part of maintenance (3.145).
Note 3 to entry: Repair can affect or change parts of the nonconforming product or service.
[SOURCE: ISO 9000:2015, 3.12.9]

1396 *repeatability*

	ISO 14952-1:2003	2.26	TC20/SC14/WG6

1762 closeness of the agreement between the results of successive measurements of the same measurand carried out under the same conditions of measurement
[VIM:1993, definition 3.6]

1397 *reproducible process*

	ISO 16290:2013	2.17	TC20/SC14/WG5

1763 process (2.15) that can be repeated in time
Note 1 to entry: It is fundamental in the definition of "mature technology" and is intimately linked to realization capability and to verifiability.
Note 2 to entry: An element developed "by chance", even if meeting the requirements, can obviously not be declared as relying on a mature technology if there is little possibility of reproducing the element on a reliable schedule. Conversely, reproducibility implicitly introduces the notion of time in the mature technology definition. A technology can be declared mature at a given time, and degraded later at a lower readiness level because of the obsolescence of its components or because the processes involve a specific organization with unique skills that has closed.

1398 *request for approval*

	ISO 10794:2018	3.6	TC20/SC14/WG5

1764 document by which the supplier or user asks the competent body for permission to use a critical material, part or process

1399 *request for waiver*

RFW	**ISO 10795:2019**	3.200	TC20/SC14/WG5

1765 vehicle for requiring and agreeing to the use or the delivery of a product (3.173) that does not conform to its approved product configuration baseline (3.51)

1400 *requirement*

	ISO 10795:2019	3.201	TC20/SC14/WG5

1766 need or expectation that is stated, generally implied or obligatory
Note 1 to entry: "Generally implied" means that it is custom or common practice for the organization (3.163) and interested parties, that the need or expectation under consideration is implied.
Note 2 to entry: A specified requirement is one that is stated, for example in documented information.
Note 3 to entry: A qualifier can be used to denote a specific type of requirement, e.g. product (3.173) requirement, quality (3.188) management (3.146) requirement, customer (3.78) requirement, quality requirement.
Note 4 to entry: Requirements can be generated by different interested parties or by the organization itself.
Note 5 to entry: It can be necessary for achieving high customer satisfaction to fulfil an expectation of a customer even if it is neither stated nor generally implied or obligatory.
Note 6 to entry: This constitutes one of the common terms and core definitions for ISO management system (3.147) standards (3.228) given in Annex SL of the Consolidated ISO Supplement to the ISO/IEC Directives, Part 1. The original definition has been modified by adding Notes 3 to 5 to entry.
[SOURCE: ISO 9000:2015, 3.6.4]

	ISO 16290:2013	2.18	TC20/SC14/WG5

1767 need or expectation that is stated and to be complied with
Note 1 to entry: Adapted from ISO 10795, definition 1.190.

ISO 16404:2013 3.5 TC20/SC14/WG5

1768 formalized statement identifying a capability, a functionality, a physical characteristic, or a quality that must be met or possessed by a system or system component to satisfy a contract, a standard, a specification, or other formally imposed documents
Note 1 to entry: A requirement may be developed at any point in the product lifecycle by any number of stakeholders.
Note 2 to entry: A requirement is a need or expectation that is stated, generally implied, or obligatory.
[SOURCE: ISO 10795]

ISO 17566:2011 2.6 TC20/SC14/WG2

1769 need or expectation, stated or generally implied, whose fulfillment is obligatory

ISO 24917:2010 3.13 TC20/SC14/WG2

1770 need or expectation that is stated, generally implied or obligatory
NOTE 1 “Generally implied” means that it is custom or common practice for the organization, its customers and other interested parties that the need or expectation under consideration is implied.
NOTE 2 A qualifier can be used to denote a specific type of requirement, e.g. product requirement, quality management requirement, customer requirement.
NOTE 3 A specified requirement is one which is stated, for example, in a document.
NOTE 4 Requirements can be generated by different interested parties.
[ISO 9000:2005, definition 3.1.2]

1401 *requirement validation*

ISO 16404:2013 3.9 TC20/SC14/WG5

1771 set of activities to ensure that requirements are correct and complete so that the product meets upper-level requirements and user needs

1402 *requirements baseline*

ISO 16404:2013 3.6 TC20/SC14/WG5

1772 set of requirements that has been formally reviewed and agreed upon, that thereafter serves as the basis for further development, and that can be changed only through formal change control procedures

1403 *requirements creep*

ISO/TS 18667:2018 3.1.10 TC20/SC14/WG5

1773 discovery of one or more new requirements after start of a project, statement of work (SOW), or memorandum of agreement (MOA)

1404 *requirements falsification*

ISO/TS 18667:2018 3.1.11 TC20/SC14/WG5

1774 act of creating one or more false requirements after start of a project, statement of work (SOW), or memorandum of agreement (MOA)

1405 *Requirements Management*

RM **ISO 16404:2013** 3.7 TC20/SC14/WG5

1775 discipline that covers all the tasks that shall be performed to manage requirements, such as gathering, developing, organizing, tracing, analysing, reviewing, allocating, changing, and validating requirement objects, as well as managing documents and databases that contain them with the purpose of defining and delivering the right product or service

1406 *Requirements Management plan*

RM plan **ISO 16404:2013** 3.8 TC20/SC14/WG5

1776 management plan which describes all the activities related to Requirements Management for a specific project or programme that includes the requirement cascading activity and the Requirements Management interaction with Configuration Management and Functional Analysis
Note 1 to entry: This plan describes the activities that need to be performed to support the verification and validation activities in order that the design and product can be verified against requirements.

1407 *research test*

ISO 17540:2016 2.34 Types of engine tests: Test purposes 2.34.1 TC20/SC14/WG2

1777 engine test (2.27.1) for the purpose of a parameter value area to determine where the engine is in working condition

1408 *reserve of capacity for work parameter*

ISO 17540:2016 2.43 Analysis of engine technical status 2.43.3 TC20/SC14/WG2

1778 difference between the capacity for work parameter value and its critical value during engine test (2.27.1) or operation

1409 *residual risk*

ISO 10795:2019 3.202 TC20/SC14/WG5

1779 risk (3.206) remaining after implementation of risk reduction measures
[SOURCE: ISO 17666:2016, 2.1.10]

ISO 14620-1:2018 3.1.15 TC20/SC14/WG5

1780 risk remaining in a system after completion of the hazard reduction and control process
[SOURCE: EN 13701:2001]

ISO 17666:2016 3.1.10 TC20/SC14/WG5

1781 risk remaining after implementation of risk reduction measures

1410 *residual safety risk*

ISO 14620-2:2019 3.16 TC20/SC14/WG5

1782 safety risk (3.19) associated with the hazards and/or hazardous situations remaining in a space system after eliminating hazards and hazardous situations as much as practical, and reducing the unacceptable safety risks

1411 *residual strength*

ISO 10786:2011	3.49	TC20/SC14/WG1

1783 maximum value of load and/or pressure (stress) that a flawed or damaged structural item is capable of sustaining without further damage or collapse, considering appropriate environmental conditions

ISO 14623:2003	2.53	TC20/SC14/WG1

1784 maximum value of load and/or pressure (stress) that a cracked or damaged body is capable of sustaining

ISO 21347:2005	3.30	TC20/SC14/WG1

1785 maximum value of load and/or pressure (stress) that a cracked or damaged structural item is capable of sustaining, considering appropriate environmental conditions

1412 *residual stress*

ISO 10786:2011	3.50	TC20/SC14/WG1

1786 stress that remains in a structure after processing, fabrication, assembly, testing or operatior
EXAMPLE Welding-induced residual stress.
[ISO 14623:2003]

ISO 14623:2003	2.54	TC20/SC14/WG1

1787 stress that remains in a structure after processing, fabrication, assembly, testing, or operation
EXAMPLE Welding-induced residual stress.

1413 *resolved risk*

ISO 17666:2016	3.1.11	TC20/SC14/WG5

1788 risk that has been rendered acceptable

1414 *resource*

ISO 16091:2018	3.1.18	TC20/SC14/WG5

1789 any physically or conceptually identifiable entity whose use and state at any time can be unambiguously determined
[SOURCE: IEC 60050-715-02-01:1992]

1415 *responsible authority*

ISO 14620-2:2019	3.17	TC20/SC14/WG5

1790 ministry, department, agency, subsection, or office of a government or international governmental organization, which is responsible for space activities including, but not limited to, launch (3.8) operations in a specified location or country

1416 *responsible organization*

ISO 15388:2012	3.1.41	TC20/SC14/WG6

1791 organization that is responsible for the contamination and cleanliness control programme and which is provided with the authority and resources needed to carry out the programme

1417 *restartable engine*

	ISO 17540:2016	2.4 Engine types by multiplicity of use and integration 2.4.4	TC20/SC14/WG2

1792 multi-start engine
restartable engine
engine started multiple times for one specific purpose

1418 *retrorocket engine*

	ISO 17540:2016	2.5 Engine types by purpose 2.5.4	TC20/SC14/WG2

1793 engine intended to reduce the speed of the space vehicle

1419 *re-use*

	ISO 10788:2014	2.1.10	TC20/SC14/WG4

1794 after a simulant volume is used (any sequence of events in which a simulant volume is removed from a storage container) then placed back into storage, any future use constitutes re-use

1420 *revetment*

	ISO 22538-6:2010	3.1.1	TC20/SC14/WG6

1795 facing of masonry for protecting an embankment

1421 *review*

	ISO 10795:2019	3.203	TC20/SC14/WG5

1796 documented process (3.171) of the requirement (3.201) conformity (3.60) or nonconformity (3.157) objective evaluation (3.97) against the requirements specified by standards (3.228) or specifications and their incomes on reaching any milestone (3.153)
Note 1 to entry: Additional activities performed during the review include:
– analysis (3.12) of the reasons of nonconformities;
– elaboration of recommendations on improving.
[SOURCE: ISO 15865:2005, 3.1.2]

	ISO 15865:2005	3.1.2	TC20/SC14/WG5

1797 documented process of the requirement conformity or nonconformity objective evaluation against the requirements specified by standards or specifications and their incomes on reaching any milestone
NOTE 1 Additional activities performed during the review include:
- analysis of the reasons of nonconformities;
- elaboration of recommendations on improving.
NOTE 2 This definition accords with that given in ISO 21349.

1422 *review board*

	ISO 10795:2019	3.204	TC20/SC14/WG5

1798 body, organized into sub-entities, as necessary, consisting of a review board chairperson or delegated person and review board members charged with evaluating the evidence of project (3.178) status, along with identifying issues and necessary corrective actions (3.68), to determine that the objectives and success criteria of a review (3.203) milestone (3.153) have been met
Note 1 to entry: The purpose of the review board is to prepare an objective evaluation (3.97) of the project status. Achievement of an objective evaluation is aided by use of independent experts who have no prior association with the project and no personal conflict of interest with respect to the outcome of the review.
[SOURCE: ISO 21349:2007, 3.8]

	ISO 21349:2007	3.8	TC20/SC14/WG5

1799 body, organized into sub-entities, as necessary, consisting of a review board chairperson or delegated person and review board members, charged with evaluating the evidence of project status, along with identifying issues and necessary corrective actions, to determine that the objectives and success criteria of a review milestone have been met
NOTE The purpose of the review board is to prepare an objective evaluation of the project status. Achievement of an objective evaluation is aided by use of independent experts who have no prior association with the project and no personal conflict of interest with respect to the outcome of the review.

	ISO 22137:2020	3.1.3	TC20/SC14/WG5

1800 body, organized into sub-entities, as necessary, consisting of a chairperson or delegated person and members, charged with evaluating the evidence of project status, along with identifying issues and necessary corrective actions, to determine that the objectives and success criteria of a review milestone have been met
Note 1 to entry: The purpose of the review board is to prepare an objective evaluation of the project status. Achievement of an objective evaluation is aided by use of independent experts who have no prior association with the project and no personal conflict of interest with respect to the outcome of the review
[SOURCE: ISO 21349:2007, 3.8, modified — duplication of "review board" within definition has been removed]

1423 *review board chairperson*

	ISO 21349:2007	3.9	TC20/SC14/WG5

1801 leader of the review board, who approves the review policy, objectives, success criteria, organization of the review board and nomination of review board members

1424 *review board member*

	ISO 21349:2007	3.10	TC20/SC14/WG5

1802 independent expert, sometimes termed a subject matter expert, who is a participant in the review board

1425 *review policy*

	ISO 21349:2007	3.11	TC20/SC14/WG5

1803 policy that provides either requirements or guidance (or both) for the overall conduct of the review

	ISO 22137:2020	3.1.4	TC20/SC14/WG5

1804 policy that provides either requirements or guidance (or both) for the overall conduct of the review
[SOURCE: ISO 21349:2007, 3.11]

1426 *rework*

	ISO 10795:2019	3.205	TC20/SC14/WG5

1805 action (3.9) on a nonconforming product (3.173) or service to make it conform to the requirements (3.201)
Note 1 to entry: Rework can affect or change parts (3.48) of the nonconforming product or service.
[SOURCE: ISO 9000:2015, 3.12.8]

1427 *rigidity spectrum*

Φi(R)	**ISO 15390:2004**	2.3	TC20/SC14/WG4

1806 rigidity distribution of cosmic ray particle fluxes

1428 *ring nozzle*

	ISO 17540:2016	2.15 Nozzle types 2.15.5	TC20/SC14/WG2

1807 axisymmetric nozzle (2.15.1) in which some or all perpendicular symmetry axes of the combustion products flow section are rings

1429 *rise-off*

	ISO 15389:2001	3.14	TC20/SC14/WG3

1808 term applied to a device to denote that its actuation is solely caused by a vehicle's vertical motion

1430 *risk*

	ISO 10795:2019	3.206	TC20/SC14/WG5

1809 undesirable situation or circumstance that has both a likelihood of occurring and a potentially negative consequence on a project (3.178)
Note 1 to entry: Risks arise from uncertainty (3.241) due to a lack of predictability or control of events. Risks are inherent to any project and can arise at any time during the project life cycle (3.141); reducing these uncertainties reduces the risk.
[SOURCE: ISO 17666:2016, 3.1.12]

	ISO 11231:2019	3.1.5	TC20/SC14/WG5

1810 undesirable situation or circumstance that has both a likelihood of occurring and a potentially negative consequence on a project
Note 1 to entry: Risks arise from uncertainty due to a lack of predictability or control of events. Risks are inherent to any project and can arise at any time during the project life cycle; reducing these uncertainties reduces the risk.
[SOURCE: ISO 17666:2016, 3.1.12]

	ISO 17666:2016	3.1.12	TC20/SC14/WG5

1811 undesirable situation or circumstance that has both a likelihood of occurring and a potentially negative consequence on a project
Note 1 to entry: Risks arise from uncertainty due to a lack of predictability or control of events. Risks are inherent to any project and can arise at any time during the project life cycle; reducing these uncertainties reduces the risk

	ISO 22538-4:2007	3.8	TC20/SC14/WG6

1812 probability of loss or injury from a hazard

	ISO 23460:2011	3.2	TC20/SC14/WG5

1813 quantitative measure of the magnitude of a potential loss and the probability of incurring that loss
NOTE 1 In Clause 6, the term "risk" is as defined in ISO 17666.
NOTE 2 In the context of this International Standard, "risk" is related to the potential loss or degradation of the required technical performance that affects the attainment of dependability objectives.

1431 *risk assessment*

	ISO 10795:2019	3.207	TC20/SC14/WG5

1814 process (3.171) of qualitative risk (3.206) categorization and/or quantitative risk evaluation (3.97)

1432 *risk communication*

	ISO 17666:2016	3.1.2	TC20/SC14/WG5

1815 all information and data necessary for risk management addressed to a decision maker and to relevant actors within the project hierarchy

1433 *risk contribution*

	ISO 11231:2019	3.1.6	TC20/SC14/WG5

1816 measure of the decrease of the probability (3.1.3) of a top consequence, when the events associated with the corresponding risk contributor are assumed not to occur
Note 1 to entry: Risk contribution indicates (and is directly proportional to) the "risk reduction potential" of the risk contributor. Important risk contributors are events, which have a high-risk contribution and risk reduction potential.
Note 2 to entry: Risk contribution provides a systematic measure that makes it possible to rank design and operation constituents of a system from a safety risk point of view. It allows the identification of high risk or vulnerable areas in the system, which can then serve as drivers for safety improvements.

1434 *risk contributor*

	ISO 11231:2019	3.1.7	TC20/SC14/WG5

1817 single event or particular set of events upon which the risk depends
Note 1 to entry: Risk contributors can be ranked relative to each other by their risk contribution (3.1.7).

1435 *risk index*

	ISO 17666:2016	3.1.3	TC20/SC14/WG5

1818 combined score used to measure the likelihood of occurrence, magnitude, and severity of risk

1436 *risk management*

	ISO 10795:2019	3.208	TC20/SC14/WG5

1819 systematic and iterative optimisation of the project (3.178) resources, performed according to the established project risk management policy (3.209)
[SOURCE: ISO 17666: 2016, 3.1.5]

	ISO 11231:2019	3.1.8	TC20/SC14/WG5

1820 systematic and iterative optimisation of the project resources, performed according to the established project risk management policy
[SOURCE: ISO 17666:2016, 3.1.5]

	ISO 17666:2016	3.1.5	TC20/SC14/WG5

1821 systematic and iterative optimisation of the project resources, performed according to the established project risk management policy

1437 *risk management policy*

	ISO 10795:2019	3.209	TC20/SC14/WG5

1822 organization's (3.163) attitude towards risks (3.206), how it conducts risk management (3.208), the risks it is prepared to accept and how it defines the main requirements (3.201) for the risk management plan
[SOURCE: ISO 17666: 2016, 3.1.6]

	ISO 17666:2016	3.1.6	TC20/SC14/WG5

1823 organisation’s attitude towards risks, how it conducts risk management, the risks it is prepared to accept and how it defines the main requirements for the risk management plan

1438 *risk management process*

	ISO 17666:2016	3.1.7	TC20/SC14/WG5

1824 all project activities related to the identification, assessment, reduction, acceptance, and feedback of risks

1439 *risk reduction*

	ISO 17666:2016	3.1.9	TC20/SC14/WG5

1825 implementation of measures that leads to reduction of the likelihood or severity of risk
Note 1 to entry: Preventive measures aim at eliminating the cause of a problem situation, and mitigation measures aim at preventing the propagation of the cause to the consequence or reducing the severity of the consequence or the likelihood of the occurrence

1440 *risk scenario*

	ISO 11231:2019	3.1.9	TC20/SC14/WG5

1826 sequence or combination of events leading from the initial cause to the unwanted consequence
Note 1 to entry: The cause can be a single event or something activating a dormant problem.
[SOURCE: ISO 17666:2016, 3.1.13]

	ISO 17666:2016	3.1.13	TC20/SC14/WG5

1827 sequence or combination of events leading from the initial cause to the unwanted consequence
Note 1 to entry: The cause can be a single event or something activating a dormant problem

1441 *risk trend*

	ISO 17666:2016	3.1.14	TC20/SC14/WG5

1828 evolution of risks throughout the life cycle of a project

1442 *rocket engine*

RE	**ISO 17540:2016**	2.1 General 2.1.1	TC20/SC14/WG2

1829 reaction engine producing thrust for vehicle movement with the help of substances and energy sources contained within the vehicle being moved

1443 *rocket unit*

	ISO 24917:2010	3.4	TC20/SC14/WG2

1830 space launch vehicle stage including the upper stage vehicle, body, propulsion system, control systems or control system elements, rocket units separation aids and telemetry hardware

1444 *room temperature*

	ISO 14624-3:2005	3.11	TC20/SC14/WG6

1831 room temperature is equal to (23 ± 3) °C

1445 *root cause*

	ISO 16159:2012	2.13	TC20/SC14/WG3

1832 primal condition, event or circumstance, or initiating cause, that is ultimately responsible for the occurrence of a failure

	ISO 18238:2015	3.1	TC20/SC14/WG5

1833 original event, action, and/or condition resulting in an actual or potential undesirable condition, situation, nonconformity or failure
Note 1 to entry: There are often several root causes for one problem.

1446 *root cause analysis*

	ISO 18238:2015	3.2	TC20/SC14/WG5

1834 process of identifying all root causes that have or may have resulted in an undesirable condition, situation, nonconformity or failure

1447 *Root Mean Square*

RMS	**ISO 19924:2017**	3.18	TC20/SC14/WG2

1835 <of a time varying quantity> obtained by squaring the amplitude at each instant, obtaining the average of the squared values over the interval of interest and then taking the square root of this average

1448 *rotational machinery*

	ISO 21347:2005	3.31	TC20/SC14/WG1

1836 device with a spinning part such as a fan and a rotor that has a high kinetic energy
EXAMPLES Control momentum gyroscopes and energy storage flywheels.
NOTE The energy level is defined by each project. If an appropriate value is not defined by the project, the value taken is 19 310 J or greater, based on 0,5 $I\omega^2$, where I is the moment of inertia (kg • m^2) and ω is the angular velocity (rad •s^{-1}).

1449 *rough cleaning*

	ISO 14952-1:2003	2.27	TC20/SC14/WG6

1837 rough cleaning/precleaning
cleaning process normally used to achieve the visibly clean (2.35) cleanliness level

1450 *round nozzle*

	ISO 17540:2016	2.15 Nozzle types 2.15.2	TC20/SC14/WG2

1838 axisymmetric nozzle (2.15.1) in which any combustion products flow section perpendicular to symmetry axis is a circle

1451 *round robin testing*

	ISO 14624-3:2005	3.7	TC20/SC14/WG6

1839 testing of identical materials at different test facilities for the comparison of results

1452 *rupture*

	ISO 16454:2007	3.25	TC20/SC14/WG1

1840 loss of integrity by structure material differed from fatigue and ultimate creep deformation attainment, which could prevent the structure from withstanding load combinations

	ISO 17546:2016	3.32	TC20/SC14/WG1

1841 mechanical failure of a cell container or battery case induced by an internal or external cause, resulting in exposure or spillage but not ejection of solid materials [6]
[6] ST/SG/AC. 10/11/Rev.5/Amend.1, “United Nations Transport of Dangerous Goods UN Manual of Tests and Criteria, Part III, sub-section 38.3 Fifth revised edition Amendment 1”

1453 *R-X scanning*

	ISO 10830:2011	3.2	TC20/SC14/WG6

1842 beam-index scanning method that is executed on the top or bottom surface of the test block
NOTE It consists of the traverse translation of the probe in the diametrical direction of the test block and the axial rotation of the test block (see Figure 1 in standard).

1454 *R-Z scanning*

	ISO 10830:2011	3.3	TC20/SC14/WG6

1843 beam-index scanning method that is executed on the side surface of the test block
NOTE It consists of the traverse translation of the probe in the longitudinal direction of the test block and the axial rotation of the test block (see Figure 2 in standard).

1455 *safe*

	ISO 14620-2:2019	3.18	TC20/SC14/WG5

1844 property of an item and its environment that limits its potential for damage (3.2) to an acceptable risk

	ISO 26871:2012	3.1.33	TC20/SC14/WG1

1845 condition that renders the probability of an unwanted event below an agreed limit

1456 *safe life*

	ISO 10786:2011	3.52	TC20/SC14/WG1

1846 (1) design criterion under which failure does not occur in the expected environment during the service life
(2) required period during which a structural item, even containing the largest undetected flaw, is shown by
analysis or testing not to fail catastrophically under the expected service load and environment
NOTE 1 An equivalent definition is “period during which the structure is predicted not to fail in the expected service life
environment”.
NOTE 2 Safe life is also referred as damage tolerance life or fatigue life.

	ISO 14623:2003	2.55	TC20/SC14/WG1

1847 required period during which a metallic hardware item, even containing the largest undetected crack, is shown by analysis or testing not to fail catastrophically in the expected service load and environment

	ISO 21347:2005	3.32	TC20/SC14/WG1

1848 required period during which a metallic hardware item, even containing a large undetected crack, is shown by analysis or testing not to fail catastrophically in the expected service load and environment

1457 *safe state*

	ISO 14620-1:2018	3.1.16	TC20/SC14/WG5

1849 state that does not lead to critical or catastrophic consequences

1458 *safe working load*

	ISO 14625:2007	3.1.8	TC20/SC14/WG3

1850 assigned load, as shown on the identification tag, which is the maximum load the device or equipment is permitted to handle and maintain in operation

1459 *safe-life analysis*

	ISO 21347:2005	3.33	TC20/SC14/WG1

1851 fracture mechanics-based analysis that predicts the flaw growth behaviour of a flawed hardware item which is under service load spectrum
NOTE For the purposes of this International Standard, safe-life analysis is synonymous with damage tolerance analysis.

	ISO 24638:2008	3.7	TC20/SC14/WG1

1852 damage tolerance analysis
safe-life analysis

fracture mechanics-based analysis that predicts the flaw growth behaviour of a flawed hardware item which is under service load spectrum with a pre-specified scatter factor

1460 *safe-life structure*

	ISO 10786:2011	3.53	TC20/SC14/WG1

1853 structure designed according to the safe-life design criterion

1461 *safe-life test*

	ISO 21347:2005	3.34	TC20/SC14/WG1

1854 test that determines experimentally the flaw growth behaviour of a flawed hardware item which is under service load spectrum
NOTE For the purposes of this International Standard, safe-life test is synonymous with damage tolerance test.

1462 *safety*

	ISO 10795:2019	3.210	TC20/SC14/WG5

1855 state where an acceptable level of risk (3.206) is not exceeded
Note 1 to entry: Risk relates to:
– fatality,
– injury or occupational illness,
– damage to launcher (3.139) hardware (3.119) or launch site facilities,
– damage to an element of an interfacing manned flight system (3.234),
– the main functions (3.110) of a flight system itself,
– pollution of the environment (3.92), atmosphere or outer space, and
– damage to public or private property.
[SOURCE: EN 16601-00-01:2015, 2.3.178]

	ISO 14950:2004	3.1.8	TC20/SC14/WG3

1856 extent of on-board protection against failure and the provision of fail-safe modes of operation

1463 *Safety analysis*

	ISO 10795:2019	3.211	TC20/SC14/WG5

1857 technique used to systematically evaluate and resolve hazards (3.120)

1464 *safety assurance programme*

	ISO 24917:2010	3.21	TC20/SC14/WG2

1858 programme document which establishes a set of requirements and measures aimed at assuring that all safety risks associated with the space launch vehicle design, development, manufacture and use are accordingly identified, assessed, minimized, controlled and accepted

1465 *Safety critical*

	ISO 14625:2007	3.1.6	TC20/SC14/WG3

1859 any condition, event, operation, process, equipment or system with a potential for personnel injury, fatality or damage to, or loss of, equipment or property

1466 *safety critical function*

	ISO 14620-1:2018	3.1.17	TC20/SC14/WG5

1860 function that, if lost or degraded, or as a result of incorrect or inadvertent operation, would result in catastrophic or critical consequences
[SOURCE: Adapted from EN 13701:2001]

1467 *safety envelope*

	ISO 14620-3:2005	3.5	TC20/SC14/WG5

1861 area designated for launch and preorbital flight that is cleared of uninvolved persons or where the risk of injury, fatality or property damage to the public is below a designated threshold probability

1468 *safety factor*

	ISO 14622:2000	2.10	TC20/SC14/WG1

1862 coefficient by which the limit load (or pressure) is multiplied so as to account for any inaccuracies in the ki statistical distribution of the load (or pressure) and strength value
NOTE These inaccuracies are due to:
- the limited number of observations or tests used to estimate these distributions;
- calculation inaccuracies.
EXAMPLE If F represents the estimated statistical distribution of loads (or pressures) and R the estimated stat distribution of strengths and that, relative to these estimated distributions, F1 is the limit load and R1 the allowable str (ultimate or yield strength), the corresponding safety factor is: J=R1/F1

	ISO 14625:2007	3.1.7	TC20/SC14/WG3

1863 ratio of ultimate strength, breaking strength or yield strength to the material design limit stress

J	ISO 14953:2000	2.2	TC20/SC14/WG1

1864 coefficient by which a limit load is multiplied
2.2.1
yield strength safety factor
J
E
ratio of the yield load of the material to the limit load
NOTE This coefficient is applicable only to metal structures.
2.2.2
ultimate safety factor
J
R
ratio of the allowable ultimate load to the limit load

1469 *safety factor at yield strength*

J *E*	ISO 14622:2000	2.10.1	TC20/SC14/WG1

1865 ratio between the load (or pressure) at the material yield strength and the limit load (or pressure)
NOTE This factor can only be applied to metal structures.

1470 *safety margin*

ISO 14302:2002	3.1.16	TC20/SC14/WG1

1866 ratio of circuit threshold of susceptibility to induced circuit noise under worse-case expected environmental conditions (intrasystem and intersystem)

1471 *safety policy*

ISO 18322:2017	3.4	TC20/SC14/WG2

1867 overall intentions and directions of the space test centre with regard to safety as formally expressed by executive management

1472 *safety representative*

ISO 18322:2017	3.5	TC20/SC14/WG2

1868 representative from the space test centre management with designated responsibility for safety
Note 1 to entry: In the context of test centres.

1473 *Safety requirement*

ISO 15860:2006	3.1.5	TC20/SC14/WG3

1869 determined requirement whose execution guarantees work safety

1474 *Safety risk*

ISO 11231:2019	3.1.10	TC20/SC14/WG5

1870 measure of the potential consequences of a hazard considering the probability (3.1.3) of the associated mishap, the harm caused to people, and the damage caused to public and private property and the environment
EXAMPLE Expected number of casualties.
Note 1 to entry: Safety risk is always associated with a specific hazard scenario or a particular set of scenarios. The risk posed by a single scenario is called “individual scenario risk”. The risk posed by the combination of individual risks and their impact on each other is called “overall risk”.
Note 2 to entry: The magnitude of safety risk is represented by the severity and the probability (3.1.3) of the consequence.
[SOURCE: ISO 14620 2:2011, 3.30, modified — NOTE 1 and 2 have been removed; new Note 1 and 2 to entry have been added; EXAMPLE has been added]

ISO 14620-2:2019	3.19	TC20/SC14/WG5

1871 measure of the potential consequences of a hazard considering the probability of the associated mishap, the harm caused to people and the damage (3.2) caused to public and private property and the environment
Note 1 to entry: The safety risk is defined to be differentiated from political, financial, industrial, project, and other risks.
Note 2 to entry: An example of a safety risk is the expected number of casualties.

1475 *Safety, Dependability and Quality Assurance (SD&QA) Programme Capability Levels*

ISO/TS 18667:2018	3.1.12	TC20/SC14/WG5

1872 pre-tailored groups of processes that are capable of achieving measurable improvement in comprehensiveness, accuracy, and efficiency, with regard to technical risk identification, assessment, and mitigation, when implemented by transitioning from the lowest process group level (i.e. Capability level 1) through the process group levels (i.e. capability levels) that cumulatively involve a level of effort commensurate with the product's unit-value/criticality and systems engineering life cycle data content/maturity throughout its mission duration and post-mission disposal
Note 1 to entry: The product's unit-value/criticality is provided in Table 1.
Note 2 to entry: The systems engineering life cycle data content/maturity is provided in Table 3.

1476 *safety-critical function*

ISO 10795:2019	3.212	TC20/SC14/WG5

1873 function (3.110) that, if lost or degraded as a result of incorrect or inadvertent operation, can result in catastrophic (3.34) or critical (3.71, 3.72) consequences
[SOURCE: EN 16601-00-01:2015, 2.3.179]

1477 *safing*

ISO 14620-1:2018	3.1.18	TC20/SC14/WG5

1874 action of containment or control of emergency and warning situations or placing a system (or part thereof) in a predetermined safe condition
[SOURCE: EN 16601-00-01:2015, 2.3.180]

1478 *sample container*

ISO 14624-3:2005	3.10	TC20/SC14/WG6

1875 vessel which contains the test sample

1479 *satellite*

ISO 26872:2019	3.3	TC20/SC14/WG3

1876 manufactured object or vehicle intended to orbit the Earth, the moon or another celestial body

1480 *satellite capacitance*

ISO 11221:2011	2.23	TC20/SC14/WG4

1877 satellite capacitance (preferred term)
absolute capacitance (admitted term)

capacitance between a satellite body and the ambient plasma

1481 *S-basis allowable*

ISO 10786:2011	3.51	TC20/SC14/WG1

1878 mechanical strength value specified as a minimum by the governing industrial specification, or a particular contractor's specification
EXAMPLES Properties given in MMPDS (Metallic Materials Properties Development and Standardization).

1482 *SC adaptor*

	ISO 19933:2007	3.1.1	TC20/SC14/WG2

1879 structure that mates the SC to the LV and includes the separation system for SC/LV separation

1483 *scatter factor*

	ISO 10786:2011	3.54	TC20/SC14/WG1

1880 coefficient by which the number of cycles or time defined in service life is multiplied in order to account for uncertainties in material properties when performing fatigue and/or crack growth analysis
NOTE Scatter factor is sometimes referred to as life factor, which is usually used for just the difference in material data used in the analysis; for example, S-N data used in fatigue life analysis, or da/dN data used in crack grow analysis.

	ISO 24638:2008	3.27	TC20/SC14/WG1

1881 multiplying factor to be applied to the number of load/pressure cycles, for the purpose of covering the scatters that potentially exist in the material's fatigue or crack growth data

1484 *scoop-proof connector*

	ISO 26871:2012	3.1.34	TC20/SC14/WG1

1882 connector shell design in which the male contacts are recessed into the connector body to prevent mismating damage to pins (especially in blind mating applications)

1485 *scope statement*

	ISO 17255:2014	3.1.3	TC20/SC14/WG5

1883 document expressing the project scope, including major deliverables, project assumptions, project constraints and a description of work, that provides a documented basis for making further project decisions and for conforming to or developing a common understanding of project scope among the stakeholders
Note 1 to entry: Project scope refers to the work that must be performed to deliver a product, service, or result with the specified features and functions.

1486 *scrap*

	ISO 10795:2019	3.213	TC20/SC14/WG5

1884 action (3.9) on a nonconforming product (3.173) or service to preclude its originally intended use
EXAMPLE Recycling, destruction.
Note 1 to entry: In a nonconforming service situation, use is precluded by discontinuing the service.
[SOURCE: ISO 9000:2015, 3.12.10]

1487 *sealed container*

	ISO 14623:2003	2.56	TC20/SC14/WG1

1885 single, independent (not part of a pressurized system) container, component or housing that is sealed to maintain an internal non-hazardous environments, and has stored energy of less than 19 310 J and an internal pressure of less than 0,69 Mpa

1488 *secondary arc*

	ISO 11221:2011	2.24	TC20/SC14/WG4

1886 passage of current from an external source, such as a solar array, through a conductive path initially generated by a primary discharge
NOTE Figure 1 shows the various stages of a secondary arc.

1489 *secondary characteristic*

	ISO 26871:2012	3.1.35	TC20/SC14/WG1

1887 any characteristic other than the function

1490 *secondary explosive*

	ISO 26871:2012	3.1.36	TC20/SC14/WG1

1888 substance or mixture which will detonate when initiated by a shock wave, but which normally does not detonate when heated or ignited

1491 *secondary factors*

	ISO 17851:2016	3.3 Terms related to space environment factors affecting spacecrafts 3.3.2	TC20/SC14/WG4

1889 secondary (induced) factors

space factors appearing as a result of the impact of primary factors on materials but possessing of their own characteristics and physical mechanisms of the impact on materials
- spacecraft own atmosphere
- surface charging
- internal charging
- thermal cycling
- spacecraft operation factors: plasma sources (plasma contactors), electric propulsion engines
and others

1492 *secondary inspection*

	ISO 10830:2011	3.10	TC20/SC14/WG6

1890 second of two inspection stages in which scanning is carried out on the spots identified in the primary inspection using a relatively small scanning pitch, which corresponds to relatively small apparent widths of beam spread, but at a relatively low level of sensitivity (lower by the beam-edge compensation than that of the primary inspection), in order to qualify the tested block

1493 *secondary structure*

	ISO 10786:2011	3.55	TC20/SC14/WG1

1891 structure attached to the primary structure with negligible participation in the main load transfer and overall stiffness

1494 *security*

	ISO 10795:2019	3.214	TC20/SC14/WG5

1892 protection from unauthorized access or uncontrolled losses or effect

	ISO 14950:2004	3.1.9	TC20/SC14/WG3

1893 extent of on-board protection against unauthorized access to on-board telecommand functions, jamming of the telecommand channel, or corruption of the telecommand data, unauthorized access to telemetry data, or the corruption of these data

1495 *self-discharge*

	ISO 17546:2016	3.33	TC20/SC14/WG1

1894 phenomenon due to leakage current in open circuit at cell and/or battery level

1496 *self-extinguishing*

	ISO 14624-1:2003	3.3	TC20/SC14/WG6

1895 phenomenon wherein the burn length of a material does not exceed 150 mm

	ISO 14624-2:2003	4.2	TC20/SC14/WG6

1896 phenomenon wherein the burn length of a wire insulation system is less than 150 mm when exposed to an external ignition source

1497 *self-signed certificate*

	ISO 10789:2011	3.4	TC20/SC14/WG5

1897 certificate auto-generated by the signee

1498 *semi-finished item*

	ISO 16454:2007	3.26	TC20/SC14/WG1

1898 product that is used for structure manufacturing or assembling
EXAMPLE Sheets, plates, profiles, strips, etc.

1499 *sensitive hardware*

	ISO 15388:2012	3.1.43	TC20/SC14/WG6

1899 hardware that can be degraded by contamination

1500 *SEP fluences and/or peak fluxes occurrence probability*

Probability	*P*	**ISO/TR 18147:2014**	2	TC20/SC14/WG4

1900 The probability the given fluences and/or fluxes should be exceeded.

1501 *separate and distinctive checklist*

	ISO 23041:2018	3.7	TC20/SC14/WG3

1901 list that contains information to compensate the part of the operation facilities peculiar to the operations agency

1502 *separate firing mode*

	ISO 17540:2016	2.11 Low-thrust engine operation modes 2.11.6	TC20/SC14/WG2

1902 isolated firing mode
LTE operation mode where the engine returns to the initial state during the off-time (2.9.10)

1503 *separation*

	ISO 15862:2009	2.8	TC20/SC14/WG2

1903 separations of launch vehicle stages, boosters and other structural elements (e.g. fairing jettison)

1504 *separation plane*

	ISO 14303:2002	2.3	TC20/SC14/WG2

1904 plane where launch vehicle and spacecraft separation occurs

1505 *separation velocity*

	ISO 16679:2015	3.3	TC20/SC14/WG3

1905 relative speed to LV when separation is completed instantly

1506 *sequential firing*

	ISO 26871:2012	3.1.37	TC20/SC14/WG1

1906 application of the firing pulses to initiators separated in time

1507 *service arm*

	ISO 15389:2001	3.15	TC20/SC14/WG3

1907 retractable structure, usually attached to a tower used to provide either umbilical requirements, personnel access, or both to the flight vehicle
NOTE 1 A service arm is commonly called access arm, umbilical arm, or swing arm, depending upon whether it provide services for access only, umbilicals only, or both, respectively.
NOTE 2 The service-arm retracting motion may be along an arc or in a vertical or horizontal plane.

1508 *service company*

	ISO 14621-2:2019	3.1.5	TC20/SC14/WG5

1908 organization that provides services related to EEE parts (3.1.3)
EXAMPLE Distributor, screening laboratories or DPA laboratories.

1509 *service guarantee life*

	ISO 24917:2010	3.34	TC20/SC14/WG2

1909 service (guarantee) life
period starting at the completion of fabrication and continuing through all acceptance testing, maintenance, handling, storage, transportation, pre-launch testing, all phases of launch, orbital operations, disposal, re-entry or recovery from orbit

1510 *service life*

	ISO 10785:2011	3.28	TC20/SC14/WG1
1910	period of time (or number of cycles) that starts with the manufacturing of the pressurized hardware and continues through all acceptance testing, handling, storage, transportation, launch operations, orbital operations, refurbishment, re-testing, re-entry or recovery from orbit, and reuse that may be required or specified for the item [ISO 14623:2003, definition 2.57]		
	ISO 10786:2011	3.56	TC20/SC14/WG1
1911	period of time (or cycles) that starts with item inspection after manufacturing and continues through all testing, handling storage, transportation, launch operations, orbital operations, refurbishment, retesting, re-entry or recovery from orbit, and reuse that can be required or specified for the item		
	ISO 14623:2003	2.57	TC20/SC14/WG1
1912	period of time (or cycles) that starts with the manufacturing of the pressurized hardware and continues through all acceptance testing, handling, storage, transportation, launch operations, orbital operations, refurbishment, re-testing, re-entry or recovery from orbit and reuse that may be required or specified for the item		
	ISO 21347:2005	3.35	TC20/SC14/WG1
1913	period of time (or cycles) that starts with item inspection after manufacturing and continues through all testing, handling, storage, transportation, launch operations, orbital operations, refurbishment, re-entry or recovery from orbit, and reuse that may be required or specified for the item NOTE For a metal-lined COPV, the service life starts with the autofrettage process during manufacturing.		
	ISO 21648:2008	2.1.33	TC20/SC14/WG1
1914	period of time (or cycles) starting with item inspection after the manufacturing and continuing through all testing, handling, storage, transportation, normal operation, refurbishment, re-testing and reuse that may be required or specified for that part		
	ISO 24638:2008	3.28	TC20/SC14/WG1
1915	period of time (or cycles) that starts with the manufacturing of the pressurized hardware and continues through all acceptance testing, handling, storage, transportation, launch operations, orbital operations, refurbishment, re-testing, re-entry or recovery from orbit, and reuse that can be required or specified for the item		

1511 *service lifetime*

	ISO 14622:2000	2.11.4	TC20/SC14/WG1
1916	maximum period between the end of acceptance testing and the end of the structure's flight		

1512 *severity*

	ISO 10795:2019	3.215	TC20/SC14/WG5
1917	classification of a failure (3.98) or undesired event according to the magnitude of its possible consequences [SOURCE: EN 16601-00-01:2015, 2.3.184]		

1513 *shaped nozzle*

ISO 17540:2016 2.15 Nozzle types 2.15.4 TC20/SC14/WG2

1918 engine nozzle in which the expanding part has a curvilinear contour shaped for increasing nozzle efficiency

1514 *shelf life limit*

ISO 17546:2016 3.34 TC20/SC14/WG1

1919 maximum allowed time from cell activation to launch, which includes any time in storage, whatever the temperature storage conditions. [1][2]

[1] SMC standard SMC-S-017, "LITHIUM-ION BATTERY FOR SPACECRAFT APPLICATIONS"
[2] NASA/TM-2009-2215751:NESC-RP-08-75/06-069-I, "Guidelines on Lithium-ion Battery Use in Space Applications"

1515 *shock load*

ISO 10786:2011 3.57 TC20/SC14/WG1

1920 special type of transient load, where the load shows significant peaks and the duration of the load is well below the typical response time of the structure

ISO 14622:2000 2.5.3 TC20/SC14/WG1

1921 load applied in the form of shocks or percussion and for which the structure's dynamic response is significant
NOTE This load can be induced by:
- Shockwave phenomena;
- pyrotechnic systems;
- physical impacts by deployed appendages;
- explosions.

1516 *short circuit current*

Isc **ISO 15387:2005** 3.30 TC20/SC14/WG1

1922 output current of a solar cell in the short-circuit condition at a particular temperature and irradiance

1517 *shorter contour nozzle*

ISO 17540:2016 2.16 Nozzle items 2.16.4 TC20/SC14/WG2

1923 shaped nozzle contour (2.16.1) whose extending part represents the initial site of the nozzle contour extending part with uniform characteristic

1518 *significant surface*

ISO 15388:2012 3.1.44 TC20/SC14/WG6

1924 surface of an item or product that is required to meet established cleanliness level requirements

1519 *silica aerogel*

ISO 11227:2012 3.1.11 TC20/SC14/WG7

1925 low-density solid material, made with a porous, silica-based structure, used for the retrieval of ejecta fragments in impact experiments

1520 *silting*

ISO 14952-1:2003	2.28	TC20/SC14/WG6

1926 accumulation of particles (2.20) (approximately 2 urn to 20 urn) of sufficient quantity to cause a haze or obscuring of any portion of a filter membrane when viewed visually or under 40-power maximum magnification

1521 *simulation*

ISO 16781:2013	2.9	TC20/SC14/WG1

1927 use of a similar or equivalent system to imitate a real system, so that it behaves like or appears to be the real system

1522 *simulation model*

ISO 16781:2013	2.11	TC20/SC14/WG1

1928 equivalent model in the simulation system, which is transformed from mathematical model of control system by means of simulation software or hardware

1523 *simulation of control system*

ISO 16781:2013	2.10	TC20/SC14/WG1

1929 complex progress of building simulation system based on the mathematical model of control system, testing the model, solving the system dynamic equations, imitating dynamic behaviors of control system, and taking qualitative and quantitative analysis and research about scheme, structure, parameters, and performance of control system

1524 *simulation plan*

ISO 16781:2013	2.12	TC20/SC14/WG1

1930 document in which the content, operate steps and implement method of all simulation items are specified

1525 *single CubeSat*

ISO 17770:2017	3.4	TC20/SC14/WG1

1931 single 100 mm CubeSat
Note 1 to entry: Singe CubeSat is also described as “1U”.

1526 *single event effect*

SEE	**ISO 21980:2020**	3.7	TC20/SC14/WG4

1932 effect, such as malfunctions of circuit elements (software errors), or latch up, which are caused by the effect of a single high energy particle

1527 *single-component solenoid*

ISO 17540:2016	2.23 Automation units 2.23.2	TC20/SC14/WG2

1933 solenoid (2.23.1) having an oxidizer or a propellant cavity

1528 *single-mode engine*

	ISO 17540:2016	2.3 Engine types by way of work process 2.3.3	TC20/SC14/WG2

1934 engine with one major mode

1529 *single-point failure*

	ISO 10795:2019	3.216	TC20/SC14/WG5

1935 failure (3.98) of an item (3.134) that results in the unrecoverable failure of the system (3.234)

1530 *single-seated test stand*

	ISO 17540:2016	2.48 Stand types 2.48.3	TC20/SC14/WG2

1936 engine test stand (2.47.1) that has a single work station (2.47.7)

1531 *single-start engine*

	ISO 17540:2016	2.4 Engine types by multiplicity of use and integration 2.4.3	TC20/SC14/WG2

1937 engine started only once for a specific purpose

1532 *sizing pressure*

	ISO 14623:2003	2.58	TC20/SC14/WG1

1938 pressure to which a composite overwrapped pressure vessel is taken with the intent of yielding the metallic liner
NOTE The sizing operation, also referred to as autofrettage, is considered to be part of the manufacturing process and is conducted prior to acceptance proof testing.

1533 *sliding nozzle*

	ISO 17540:2016	2.15 Nozzle types 2.15.8	TC20/SC14/WG2

1939 extending nozzle
nozzle (2.12.16) with one or several sliding attachments which are nozzle expanding part continuation in extended position

1534 *small auxiliary spacecraft*

SASC	**ISO 26869:2012**	3.1.2	TC20/SC14/WG2

1940 small payload which is carried with primary spacecraft by using surplus launch capability, in order to make the best use of the launch vehicle's extra capability

1535 *Small fluxes*

Small	*S*	**ISO/TR 18147:2014**	2	TC20/SC14/WG4

1941 Small fluxes (fluences or peak fluxes)
Fluxes, sizes that exceed probability 0,9, or fluxes occurred at the 0,1 confidence level.

1536 *snapover*

	ISO 11221:2011	2.25	TC20/SC14/WG4

1942 phenomenon caused by secondary electron emission that can lead to electron collection on insulating surfaces in an electric field

1537 *sneak circuit*

	ISO 14625:2007	3.1.9	TC20/SC14/WG3

1943 unexpected path or logic flow within a system that, under certain conditions, can initiate an undesired function or inhibit a desired function
NOTE Sneak circuits are not the result of hardware failure, but are latent conditions inadvertently designed into the hardware, or coded into the software, and triggered by timing or human error.

1538 *soft excitation of self-oscillation*

	ISO 17540:2016	2.14 Operating process in chamber (gas generator) 2.14.18	TC20/SC14/WG2

1944 appearance of pressure self-oscillation in the combustion chamber (2.12.1) from small disturbances

1539 *soft magnetic material*

	ISO 21494:2019	3.17	TC20/SC14/WG2

1945 ferromagnetic material with low field strength (coercivity) that can be magnetized and demagnetized easily
EXAMPLE Invar and Kovar materials.

1540 *soft upset*

	ISO 24637:2009	3.1.5	TC20/SC14/WG1

1946 degradation in product performance where that product returns to normal with no operator intervention immediately following the removal of the immunity test stimulus

1541 *software*

S/W	**ISO 10795:2019**	3.217	TC20/SC14/WG5

1947 programs, procedures (3.170), rules and any associated documentation (3.89) pertaining to the operations of a computer system (3.234)

1542 *software module*

	ISO 10795:2019	3.218	TC20/SC14/WG5

1948 smallest program unit (3.93) that is discrete and identifiable with respect to compiling, combining with other units and loading

1543 *solar*

ISO 16378:2013 3.10, 3.11 TC20/SC14/WG6

1949 3.10
solar
<radiometric> indicating that the radiant flux involved has the sun as its source or has the relative spectral distribution of solar flux
3.11
solar
<optical> indicating a weighted average of the spectral property, with a standard solar spectral irradiance distribution as the weighting function

1544 *solar absorptance*

αs **ISO 16378:2013** 3.12 TC20/SC14/WG6

1950 ratio of the solar radiant flux absorbed by a material (or body) to the radiant flux of the incident radiation
Note 1 to entry: Differentiation is made between two methods:
a) Method of spectral measurements using a spectrophotometer covering the range from 250 nm to 2 500 nm for the determination of αs.
b) Portable equipment using a xenon flash for relative measurements (αp).

α s **ISO 16691:2014** 3.1.13 TC20/SC14/WG6

1951 ratio of the solar radiant flux absorbed by a material (or body) to the radiant flux of the incident radiation

1545 *Solar Activity*

ISO 16457:2014 2.4 TC20/SC14/WG4

1952 series of processes occurring in the sun's atmosphere which affect the interplanetary space and the Earth
Note 1 to entry: The level of solar activity is characterized by indices.

1546 *Solar activity (SA) level*

<W> **ISO/TR 18147:2014** 2 TC20/SC14/WG4

1953 13-month smoothed month sunspot number or predicted by NOAA month sunspot number. <http://www.sec.noaa.gov/Data/>

1547 *Solar activity condition*

Σ <Wi> **ISO/TR 18147:2014** 2 TC20/SC14/WG4

1954 The sum of the smoothed month sunspot numbers during the space mission

1548 *solar array back surface*

ISO 11221:2011 2.27 TC20/SC14/WG4

1955 solar array surface where solar cells are not laid down
NOTE Solar cells are not laid down on the side of a solar panel that normally faces away from the sun.

1549 *solar array front surface*

ISO 11221:2011 2.26 TC20/SC14/WG4

1956 solar array surface where solar cells are laid down
NOTE Solar cells are laid down on the side of a solar panel that normally faces the sun.

1550 *solar cell*

	ISO 15387:2005	3.31	TC20/SC14/WG1

1957 basic photovoltaic device that generates electricity when exposed to sunlight

1551 *solar constant*

	ISO 15387:2005	3.32	TC20/SC14/WG1

1958 rate of total solar energy at all wavelengths incident on a unit area exposed normally to rays of the sun at one astronomical unit in AM0 conditions
NOTE The average of values is 1 367 $W \cdot m^{-2}$ ± 7 $W \cdot m^{-2}$.

S	ISO 21348:2007	2.3	TC20/SC14/WG4

1959 total solar irradiance at normal incidence to the top of the Earth’s atmosphere through a unit surface and at 1 ua with a mean value of 1 366 W m^{-2}
See Reference [7].

NOTE The solar constant, a historical term, is not constant. It varies geometrically with the Earth’s distance from the Sun and physically with the Sun’s magnetic field activity on short to long timescales, as well as with the observer’s heliocentric latitude. The value of 1366 W m^{-2} is the measurement community’s current agreement expressed through a TSI space-based composite dataset that is normalized to an arbitrarily selected set of missions defining the SARR (see Reference [6]). A range of measured values extends from SORCE/TIM 2003-2004(+?) values
(~1 362 W m^{-2}) to NIMBUS-7/HF 1978-1993 values (~1 372 W m^{-2}), but also includes SMM/ACRIM I 1980-1989 (~1 368 W m^{-2}), ERBS/ERBE 1984-2003 (~1 365 W m^{-2}), UARS/ACRIM II 1991-2001 (~1 364 W m^{-2}), EURECA/SOVA2 1992-1993 (~1 367 W m^{-2}), SOHO/VIRGO 1996-2004(+?) (~1 366 W m^{-2}) and ACRIMSAT/ACRIM III 2000 2004(+?) (~1 364 W m^{-2}) measurements. The SARR reduces all solar constant space measurements to a single ensemble dataset. The currently measured 1-sigma variation in the composite dataset is approximately 0,6 W m^{-2} and there is a long-term (yearly) smoothed solar cycle minimum to maximum relative variation about the mean value of approximately 1,4 W m^{-2} (see Reference [7]).

1552 *solar cosmic rays*

SEP	ISO/TR 18147:2014	2	TC20/SC14/WG4

1960 Solar energetic particles (or solar cosmic rays)
High-energy (≥4 MeV/nucl) charged particle of solar origin.

1553 *solar cycle*

	ISO 27852:2016	3.1.10	TC20/SC14/WG3

1961 ≈11-year solar cycle based on the 13-month running mean for monthly sunspot number and is highly correlated with the 13-month running mean for monthly solar radio flux measurements at the 10,7cm wavelength
Note 1 to entry: Historical records back to the earliest recorded data (1945) are shown in Figure 2.
Note 2 to entry: For reference, the 25-year post-mission orbit lifetime constraint specified in ISO 24113 is overlaid onto the historical data; it can be seen that multiple solar cycles are encapsulated by this long time duration

1554 *solar elevation angle*

θ	ISO 15387:2005	3.33	TC20/SC14/WG1

1962 angle between the direct solar beam and the horizontal plane
NOTE This angle is measured in radians.

1555 *Solar energetic particles*

SEP	**ISO/TR 18147:2014**	2	TC20/SC14/WG4

1963 Solar energetic particles (or solar cosmic rays)
High-energy (≥4 MeV/nucl) charged particle of solar origin.

1556 *solar flare*

ISO 21980:2020	3.9	TC20/SC14/WG4

1964 explosion phenomenon which occurs on the surface of the sun, accompanied by the release of high energy particles

1557 *solar irradiance*

ISO 16378:2013	3.13	TC20/SC14/WG6

1965 radiation of the sun integrated over the full disk and expressed in SI units of power through a unit of area, $W{\cdot}m^{-2}$
[SOURCE: ISO 21348 (Notes in the original standard is omitted)]

ISO 21348:2007	2.2	TC20/SC14/WG4

1966 radiation of the Sun integrated over the full disk and expressed in SI units of power through a unit of area, $W\ m^{-2}$

NOTE The commonly used term “full disk” includes all of the Sun’s irradiance coming from the solar photosphere and temperature regimes at higher altitudes, including the chromosphere, transition region and corona. Some users refer to these composite irradiances as “whole Sun”. Solar irradiance is more precisely synonymous with “total solar irradiance”, while spectral solar irradiance is the derivative of irradiance with respect to wavelength and can be expressed in SI units of $W\ m^{-3}$; an acceptable SI submultiple unit description is $W\ m^{-2}\ nm^{-1}$. Mixed spectral solar irradiance units (e.g. quanta $cm^{-2}\ s^{-1}\ nm^{-1}$, photons $cm^{-2}\ s^{-1}\ A^{-1}$ and ergs $cm-2\ s^{-1}\ nm^{-1}$) can be useful as an addition to, but not as a replacement for, SI unit reporting.
Solar radiances, or the emergent energy from a spatial area that is less than the full disk of the Sun, are not explicitly covered by this International Standard at the present time unless the radiances are integrated across the full disk to represent an irradiance.
For the calibration of ground-based instruments (pyrheliometers) measuring total solar irradiance (TSI), the World Radiometric Reference (WRR) was introduced in 1980 by the World Meteorological Organisation (WMO) as a primary standard to ensure world-wide homogeneity of solar radiation measurements. The WRR is created through an ensemble of absolute cavity radiometers called the World Standard Group (WSG), located and maintained at the World Radiation Centre by the Physikalisch-Meteorologisches Observatorium Davos in Switzerland. The uncertainty of the WRR is 0,3 %. The comparison of the WRR with the SI scale that is represented by cryogenic radiometers and based on radiance measurements agrees within the quoted uncertainties of the two scales (see References [4] and [5]). The transfer of the WRR to space has been done but, because the resulting uncertainty is large compared to the variations of the solar constant, a non-mandatory Space Absolute Radiation Reference (SARR) has been introduced (see Reference [6]).

1558 *solar wind speed*

ISO/TS 21979:2018	3.4	TC20/SC14/WG4

1967 outward flux of solar particles and magnetic fields from the Sun used in external magnetic field model computation
Note 1 to entry: Typically, solar wind velocities are around 350 km/s−1.

1559 *solar wind*

SW		**ISO/TR 23989:2020**	3.1	TC20/SC14/WG4

1968 fully ionized, electrically neutral plasma that carries a magnetic field, B, and streams outward from the inner solar corona at all times

1560 *solar-magnetospheric (GSM) coordinates*

		ISO 22009:2009	2.5	TC20/SC14/WG4

1969 Cartesian geocentric coordinates, where the X-axis is directed to the sun, the Z-axis, which is orthogonal to the X-axis, lies on the plane with the X-axis and the geomagnetic dipole axis, and the Y-axis supplements the X-and Z-axes to the right-hand system

1561 *solar-magnetospheric coordinates*

		ISO 22009:2009	2.5	TC20/SC14/WG4

1970 solar-magnetospheric (GSM) coordinates
Cartesian geocentric coordinates, where the X-axis is directed to the sun, the Z-axis, which is orthogonal to the X-axis, lies on the plane with the X-axis and the geomagnetic dipole axis, and the Y-axis supplements the X-and Z-axes to the right-hand system

1562 *solenoid*

		ISO 17540:2016	2.23 Automation units 2.23.1	TC20/SC14/WG2

1971 electrical valve
engine valve whose sluice activates by the electromagnet part of the valve

1563 *sound pressure*

	p	**ISO 19924:2017**	3.3	TC20/SC14/WG2

1972 root mean square value of instantaneous sound pressure over a given time interval, unless specified otherwise
Note 1 to entry: Normally given in Pa.

1564 *sound pressure level*

SPL	*Lp*	**ISO 19924:2017**	3.4	TC20/SC14/WG2

1973 expressed by
L p = 20lg(p /p0)
where
p is root mean square value of instantaneous sound pressure (3.3) over a given time interval (Pa);
p0 is reference pressure at threshold (Pa), po = 20 μPa

1565 *space debris*

		ISO 10795:2019	3.219	TC20/SC14/WG5

1974 DEPRECATED: orbital debris
non-functional fragments of, or residue from, a space segment element (3.222), or launch segment (3.138) element, in Earth orbit or re-entering the Earth’s atmosphere
[SOURCE: EN 16601-00-01:2015, 3.3.190, modified – NOTE 1 has been removed; "orbital debris" has been added an a deprecated term.]

	ISO 14200:2012	3.13	TC20/SC14/WG4

1975 ⟨orbital debris⟩ man-made objects, including fragments and elements thereof, in Earth's orbit or reentering the atmosphere, that are non-functional
[SOURCE: ISO 24113:2011, definition 3.17]

	ISO 16126:2014	3.12	TC20/SC14/WG7

1976 space debris (preferred term)
orbital debris (preferred term)

man-made objects, including fragments and elements thereof, in Earth orbit or re-entering the atmosphere, that are non-functional
[SOURCE: ISO 24113:2011, 3.17]

	ISO 23339:2010	3.5	TC20/SC14/WG3

1977 orbital debris
space debris
all man-made objects, including fragments and elements thereof, in Earth orbit or re-entering the atmosphere, that are non-functional

	ISO 24113:2019	3.23	TC20/SC14/WG7

1978 space debris
DEPRECATED: orbital debris
objects of human origin in Earth orbit (3.8) or re-entering the atmosphere, including fragments and elements thereof, that no longer serve a useful purpose
Note 1 to entry: Spacecraft (3.25) in reserve or standby modes awaiting possible reactivation are considered to serve a useful purpose.

1566 *space debris environment model*

	ISO 14200:2012	3.12	TC20/SC14/WG4

1979 meteorid / (space) debris environment(al) model

tool that simulates realistic description of the meteoroid and debris environment of Earth, and performs risk assessment via flux predictions on user defined target orbit

1567 *space debris environmental model*

	ISO 14200:2012	3.12	TC20/SC14/WG4

1980 meteorid / (space) debris environment(al) model

tool that simulates realistic description of the meteoroid and debris environment of Earth, and performs risk assessment via flux predictions on user defined target orbit

1568 *space element*

	ISO 16091:2018	3.1.19	TC20/SC14/WG5

1981 product or set of products intended to be operated in outer space

1569 *space experiment*

SE	**ISO 14619:2003**	3.1	TC20/SC14/WG3

1982 system of operations, actions, and/or observations performed in space with the objective of obtaining information on the subject under study

1570 ***space experiment operations manager***

ISO 14619:2003 3.5 TC20/SC14/WG3

1983 person responsible for managing operations through all stages of the space experiment and for organizing the operations during the execution of the space experiment

1571 ***space experiment project manager***

ISO 14619:2003 3.4 TC20/SC14/WG3

1984 person responsible for overall management of the space experiment programme

1572 ***space experiment scientific observation***

ISO 14619:2003 3.6 TC20/SC14/WG3

1985 method of collecting information and data during the functioning of space experiment instrumentation

1573 ***space experiment system***

ISO 14619:2003 3.2 TC20/SC14/WG3

1986 set of equipment designed for the performance of the space experiment and specifically integrated into the space system and support facilities

1574 ***space experiment system designer***

ISO 14619:2003 3.3 TC20/SC14/WG3

1987 person responsible for the development, delivery, and performance of the SE system

1575 ***space fibre optic sub-system***

ISO 20780:2018 3.1.7 TC20/SC14/WG1

1988 assembly of interconnected basic fibre optic subsystems
Note 1 to entry: The assembly is specified at defined interfaces within the fibre optic system.
[SOURSE: IEC 61281-1:1999, modified]

1576 ***space flight vehicle***

ISO 14622:2000 2.1 TC20/SC14/WG1

1989 combination of the launch system elements which leave the ground, i.e. the launch vehicle and the space vehicle(s) placed in orbit by the launch vehicle

1577 ***Space Launch Vehicle***

ISO 24917:2010 3.3 TC20/SC14/WG2

1990 component of the space rocket designed for payload injection in a pre-assigned trajectory or orbit

1578 ***space launch vehicle experimental optimization***

ISO 24917:2010 3.20 TC20/SC14/WG2

1991 space launch vehicle (unit) experimental optimization
operations of modelling units, mock-ups, test prototypes in order to assure operation of items in accordance with statement of work, definition their efficiency margins

1579 *space launch vehicle unit experimental optimization*

ISO 24917:2010 3.20 TC20/SC14/WG2

1992 space launch vehicle (unit) experimental optimization
operations of modelling units, mock-ups, test prototypes in order to assure operation of items in accordance with statement of work, definition their efficiency margins

1580 *space mission*

ISO 10795:2019 3.220 TC20/SC14/WG5

1993 user-defined mission (3.154) to be achieved by a space system (3.223)
[SOURCE: EN 16601-00-01:2015, 2.3.191].

1581 *space nose section*

ISO 24917:2010 3.6 TC20/SC14/WG2

1994 set of a space vehicle with fairing and adapter and upper stage vehicle
NOTE Upper stage vehicle can be absent.

1582 *space object*

ISO 14620-2:2019 3.20 TC20/SC14/WG5

1995 space vehicle of artificial earthly origin and any of its component parts, except space debris, if any

ISO 24113:2019 3.24 TC20/SC14/WG7

1996 object of human origin which has reached outer space

ISO 27852:2016 3.1.8 TC20/SC14/WG3

1997 man-made odject in outer space

1583 *space quality*

ISO 17546:2016 3.35 TC20/SC14/WG1

1998 high reliability required for vehicles and equipments built for space use

1584 *space rocket*

ISO 24917:2010 3.2 TC20/SC14/WG2

1999 space launch vehicle plus space nose section integration

1585 *space segment*

ISO 10795:2019 3.221 TC20/SC14/WG5

2000 part of a space system (3.223), placed in space, to fulfil the space mission (3.220) objectives
[SOURCE: EN 16601-00-01:2015, 2.3.193]

ISO 14950:2004 3.2.20 TC20/SC14/WG3

2001 those elements of the overall mission system that are operated in outer space

1586 *space segment element*

ISO 10795:2019 3.222 TC20/SC14/WG5

2002 element within a space segment (3.221)
Note 1 to entry: A space segment element can be composed of several space segment elements, e.g. a spacecraft (3.224) is composed of instruments, a payload (3.165) module and a service module.
[SOURCE: EN 16601-00-01:2015, 2.3.194]

1587 *space system*

ISO 10795:2019 3.223 TC20/SC14/WG5

2003 system (3.234) that contains at least a space, a ground or a launch segment (3.138)
Note 1 to entry: Generally a space system is composed of all three segments and is supported by a support segment.
[SOURCE: EN 16601-00-01:2015, 2.3.198]

ISO 14200:2012 3.14 TC20/SC14/WG4

2004 system consisting of a space segment that includes a launch segment, spacecraft segment and a ground segment with a tracking control segment and a mission segment
[SOURCE: ISO 23041:2007]

1588 *space system operation*

ISO 23041:2018 3.10 TC20/SC14/WG3

2005 operation that contains launch segment operation, spacecraft segment operation and tracking control segment operation
Note 1 to entry: The launch segment operation includes pre-launch segment operation and the spacecraft segment operation includes the mission phase segment and the post-mission phase segment.

1589 *Space systems*

ISO 22010:2007 3.14 TC20/SC14/WG1

2006 launch vehicles, satellites, space vehicles, or components thereof

1590 *space test*

ISO 18322:2017 3.6 TC20/SC14/WG2

2007 environmental test that is applied to space items using space centres facilities

1591 *space test centre*

ISO 18322:2017 3.7 TC20/SC14/WG2

2008 complete entity including the organization which provides, maintains, develops and operates test facilities for space project and applications including accompanied services

1592 *space vehicle*

ISO 10795:2019 3.225 TC20/SC14/WG5

2009 manned or unmanned vehicle constructed or assembled for the purpose of manoeuvring, moving, operating, or being placed in outer space
Note 1 to entry: A space vehicle can be a launcher (3.139), a rocket, a payload (3.165), a space capsule, a space shuttle, a space plane, a space station, etc., or any assembled combination thereof.
[SOURCE: ISO 14620-2:2011, 3.33]

	ISO 14622:2000	2.3	TC20/SC14/WG1

2010 integrated group of subsystems and units capable of performing functions in space
NOTE Spacecraft is synonymous with space vehicle.

	ISO 26871:2012	3.1.39	TC20/SC14/WG1

2011 any satellite or launch vehicle

1593 *spacecraft*

S/C	**ISO 10795:2019**	3.224	TC20/SC14/WG5

2012 manned or unmanned vehicle designed to orbit or travel in space
Note 1 to entry: A spacecraft is a space segment element (3.222).
[SOURCE: EN 16601-00-01:2015, 2.3.199]

	ISO 14200:2012	3.15	TC20/SC14/WG4

2013 system designed to perform specific tasks or functions in space
[SOURCE: ISO 24113:2011, definition 3.18]

	ISO 14302:2002	3.1.17	TC20/SC14/WG1

2014 space vehicle which includes launcher, orbiting platform and probe(s)

	ISO 14950:2004	3.2.21	TC20/SC14/WG3

2015 all subsystems (sometimes called the platform, the service module or the bus) plus any experiment or payload elements (sometimes called the payload module)

	ISO 15864:2004	3.1.9	TC20/SC14/WG2

2016 vehicle of an integrated set of subsystems and units capable of supporting an operational role in space

	ISO 16126:2014	3.13	TC20/SC14/WG7

2017 system designed to perform specific tasks or functions in space
[SOURCE: ISO 24113:2011, 3.18]

	ISO 23339:2010	3.6	TC20/SC14/WG3

2018 system designed to perform specific tasks or functions in space
NOTE A spacecraft that can no longer fulfil its intended mission is considered non-functional. Spacecraft in reserve or standby modes awaiting possible reactivation are considered functional.

	ISO 24113:2019	3.25	TC20/SC14/WG7

2019 system designed to perform a set of tasks or functions in outer space, excluding launch vehicle (3.12)

	ISO 26871:2012	3.1.38	TC20/SC14/WG1

2020 satellite or other orbiting vehicle with self-propulsion

	ISO 26872:2019	3.4	TC20/SC14/WG3

2021 system designed to perform a set of tasks or functions in outer space, excluding launch vehicles
[SOURCE: ISO 24113:2019, 3.25]

1594 *Spacecraft Adapter*

SC adapter	**ISO 17401:2004**	2.1.2	TC20/SC14/WG2

2022 structure that mates the SC to the LV and includes the separation system for SC/LV separation
NOTE The SC adapter is a part of the LV and does not separate with the SC.

1595 *spacecraft charging*

	ISO 15388:2012	3.1.45	TC20/SC14/WG6

2023 increase in electrostatic potential on spacecraft surfaces resulting from low-energy electron flux impinging on the surface

1596 *spacecraft maximum allowable concentration*

SMAC	**ISO 14624-3:2005**	3.4	TC20/SC14/WG6

2024 maximum concentration of an offgassed product that is allowed in the habitable area of the spacecraft for a specified flight duration
NOTE SMAC values for manned spacecraft are determined by the cognizant procuring authority/user toxicologist. A current listing of SMAC values is maintained on the Internet at http://www.jsc.nasa.gov/toxicology/Guidelines.

1597 *spacecraft operation handbook*

	ISO 23041:2018	3.8	TC20/SC14/WG3

2025 handbook that includes information needed for normal and contingent TLM/CMD operations

1598 *spacecraft status*

	ISO 14950:2004	3.2.22	TC20/SC14/WG3

2026 all the information necessary to assess the operational status of the spacecraft at a given time
EXAMPLE All the information needed to determine all the criteria driving operational decisions.

1599 *spacecraft system*

SC system	**ISO 14303:2002**	2.1	TC20/SC14/WG2

2027 Spacecraft bus, payload and all items supplied by the SC contractor in support of the launch effort

1600 *spacecraft-to-launch-vehicle interface*

SC/LV interface	**ISO 15862:2009**	2.7	TC20/SC14/WG2

2028 mechanical interface that connects spacecraft (or spacecraft-provided adapter) to launch-vehicle-provided adapter

1601 *space-rocket complex*

	ISO 24917:2010	3.1	TC20/SC14/WG2

2029 set of a space vehicle or space launch vehicles with functionally interconnected means and the constructions intended for transportation, storage, maintenance service, preparation, launching and flight control of space launch vehicles on a trajectory of launching of payload

1602 *spall*

	ISO 11227:2012	3.1.12	TC20/SC14/WG7

2030 piece of material broken and ejected upon high-velocity impact, usually by stress waves, mainly on brittle material
NOTE If the resulting tensile stress caused by the reflection of the compression wave on the surface (front or back) exceeds the tensile strength of the material, a thin sheet of material separates from the target and is ejected.

1603 *spare part*

	ISO 26870:2009	3.16	TC20/SC14/WG3

2031 item, part, device, tool or material required to repair and maintain a facility, system or item of equipment

1604 *spare-part use instruction*

SPUI	**ISO 26870:2009**	3.18	TC20/SC14/WG3

2032 spare-part use instruction
spare-part use procedure

document containing detailed descriptions of the operations or tests required to use spare parts

1605 *spare-part use procedure*

SPUI	**ISO 26870:2009**	3.18	TC20/SC14/WG3

2033 spare-part use instruction
spare-part use procedure

document containing detailed descriptions of the operations or tests required to use spare parts

1606 *spare-parts list*

SPL	**ISO 26870:2009**	3.17	TC20/SC14/WG3

2034 document that identifies all spare parts

1607 *special periodic test*

	ISO 17540:2016	2.34 Types of engine tests: Test purposes 2.34.10	TC20/SC14/WG2

2035 engine periodic test for the purpose of a quality conformity assessment of the engines manufactured for delivery to operation at a level reached during development finishing

1608 *special pressurized equipment*

	ISO 10786:2011	3.41	TC20/SC14/WG1

2036 pressurized equipment (preferred term)
special pressurized equipment (admitted term)

piece of equipment that meets the pressure vessel definition, but for which it is not feasible or cost effective to comply with the requirements applicable to pressure vessels
EXAMPLES Batteries, heat pipes, cryostats and sealed containers.

1609 *special process*

	ISO 10794:2018	3.7	TC20/SC14/WG5

2037 process where quality cannot be completely ensured by inspection of the end article only

1610 *Special requirements*

	ISO 10795:2019	3.226	TC20/SC14/WG5

2038 requirements (3.201) identified by the customer (3.78), or determined by the organization (3.163), which have high risks (3.206) of not being met, thus requiring their inclusion in the operational risk management (3.208) process (3.171). Factors used in the determination of special requirements include product (3.173) or process complexity, past experience, and product or process maturity
EXAMPLE Examples of special requirements include performance (3.166) requirements imposed by the customer that are at the limit of the industry's capability, or requirements determined by the organization to be at the limit of its technical or process capabilities.
Note 1 to entry: Special requirements and critical items (3.76), along with key characteristics (3.135), are interrelated. Special requirements are identified when determining and reviewing requirements related to the product. Special requirements can require the identification of critical items. design (3.82, 3.83) output can include identification of critical items that require specific actions (3.9) to ensure they are adequately managed. Some critical items will be further classified as key characteristics because their variation needs to be controlled.
[SOURCE: EN 9100:2016 modified – The word "those" at the beginning of the definition has been removed.]

1611 *special test conditions*

	ISO 17540:2016	2.37 Test conditions 2.37.5	TC20/SC14/WG2

2039 engine test conditions which are provided by stand special adjustment and/or engine adjustment (2.36.2) and/or special requirements to exposure factors

1612 *specific authorized operator*

	ISO 14620-2:2019	3.21	TC20/SC14/WG5

2040 entity allowed or licensed to conduct a space operation in an independent way according to relevant applicable space law

1613 *specific impulse*

	ISO 17540:2016	2.7 General parameters and performance of engine 2.7.16	TC20/SC14/WG2

2041 ratio of engine thrust to the mass flow of propellant $I_s = (R/\dot{m})$
Note 1 to entry: Thrust engine (chamber) specific impulse is converted in a vacuum and at sea level.
Note 2 to entry: Thrust engine (chamber) specific impulse is also an equalled derivative from the thrust engine (chamber) impulse by weight or volume of propellant consumed.
Note 3 to entry: For LTE (2.1.3), the term “specific impulse” is used for steady-state continuous mode, single inclusions mode and the steady-state impulse mode.

1614 *specific weight of turbine pump*

	ISO 17540:2016	2.22 Turbine pump general characteristics 2.22.1	TC20/SC14/WG2

2042 turbine pump weight per unit capacity that is increased by the turbine (2.20.3)

1615 *specification*

	ISO 10795:2019	3.227	TC20/SC14/WG5

2043 document (3.88) stating requirements (3.201)
EXAMPLE Quality (3.188) manual, quality plan (3.193), technical drawing, procedure (3.170) document, work instruction.
Note 1 to entry: A specification can be related to activities (e.g. procedure document, process (3.171) specification and test (3.239) specification), or products (3.173) (e.g. product specification, performance (3.166) specification and drawing).
Note 2 to entry: It can be that, by stating requirements, a specification additionally is stating results achieved by design (3.82, 3.83) and development (3.85) and thus in some cases can be used as a record (3.194).
[SOURCE: ISO 9000:2015, 3.8.7]

	ISO 16091:2018	3.1.20	TC20/SC14/WG5

2044 document stating requirements
EXAMPLE Quality manual, quality plan, technical drawing, procedure document, work instruction.
Note 1 to entry: A specification can be related to activities (e.g. procedure document, process specification and test specification), or products (e.g. product specification, performance specification and drawing).
Note 2 to entry: It can be that, by stating requirements, a specification additionally is stating results achieved by design and development and thus in some cases can be used as a record.
[SOURCE: ISO 9000:2015, 3.8.7]

	ISO 21351:2005	3.1.10	TC20/SC14/WG5

2045 document stating requirements
NOTE 1 A specification can be related to activities (e.g. procedure document, process specification and test specification), or products (e.g. functional specification, technical specification)
NOTE 2 Adapted from ISO 9000:2000.

1616 *specimen*

ISO 11227:2012 3.1.13 TC20/SC14/WG7

2046 target
representative sample of a spacecraft material that is used in impact experiments

1617 *spectral*

ISO 16378:2013 3.14, 3.15 TC20/SC14/WG6

2047 3.14
spectral
<optical> indicating that the property was evaluated at a specific wavelength, λ, within a small wavelength interval, Δλ about λ, symbol wavelength in parentheses as 1(350 nm), or as a function of wavelength, symbol L(λ)
Note 1 to entry: The parameters of frequency, v, wave-number, k, or photon energy can be substituted for wavelength, λ, in this definition.
3.15
spectral
<radiometric> the concentration of the quantity per unit wavelength (or frequency), indicated by the subscript lambda, as $L_\lambda = dL/d\lambda$
Note 1 to entry: The parameters of frequency, v, wave-number, k, or photon energy can be substituted for wavelength, λ, in this definition.
Note 2 to entry: At a specific wavelength, the wavelength at which the spectral concentration was evaluated can be indicated by the wavelength in parentheses following the symbol, L_λ (350 nm).

1618 *spectral irradiance*

Eλ **ISO 15387:2005** 3.34 TC20/SC14/WG1

2048 irradiance per unit bandwidth at a particular wavelength
NOTE The units are expressed as W·m⁻²·m¯6.

1619 *spectral irradiance distribution*

ISO 15387:2005 3.36 TC20/SC14/WG1

2049 spectral irradiance plotted as a function of wavelength
NOTE The units are expressed as W·m⁻²·m¯6.

1620 *spectral photon irradiance*

Epλ **ISO 15387:2005** 3.35 TC20/SC14/WG1

2050 photon flux density at a particular wavelength
NOTE (see formula in standards), where λ is expressed in micrometers.
NOTE Epλ = 5,035 × 10¬14 λ · Eλ, where λ is expressed in micrometers.

1621 *spectral response*

S(λ) **ISO 15387:2005** 3.37 TC20/SC14/WG1

2051 short-circuit current density generated by unit irradiance at a particular wavelength as a function of wavelength
NOTE The units is A·W⁻¹.

1622 *spectrum*

	ISO 21980:2020	3.10	TC20/SC14/WG4

2052 array of entities, such as light waves or particles, ordered in accordance with the magnitudes of a common physical property, such as wavelength or mass
Note 1 to entry: In this document, the spectrum refers to the items that express the particle flux (3.2) density of the radiation for each energy.

1623 *specular*

	ISO 16378:2013	3.16	TC20/SC14/WG6

2053 indicates that the flux leaves a surface or medium at an angle that is numerically equal to the angle of incidence, lies in the same plane as the incident ray and the perpendicular, but is on the opposite side of the perpendicular to the surface
Note 1 to entry: Reversing the order of terms in an adjective reverses the geometry of the incident and collected flux, respectively.

1624 *speed lag*

	ISO 17540:2016	2.19 Flow in nozzle 2.19.5	TC20/SC14/WG2

2054 speed difference of the condensed phase particle and the gaseous environment in a nozzle (2.12.16)

1625 *sphericity*

	ISO 10788:2014	2.1.11	TC20/SC14/WG4

2055 degree to which the shape of a particle approaches a sphere

1626 *stability*

	ISO 16781:2013	2.13	TC20/SC14/WG1

2056 ability of a system submitted to bound external disturbances to remain indefinitely in a bounded domain around an equilibrium position or around an equilibrium trajectory

1627 *stability boundary of operating process*

	ISO 17540:2016	2.14 Operating process in chamber (gas generator) 2.14.24	TC20/SC14/WG2

2057 set of chamber (gas generator) operating mode parameter values that divide the operating process stability and instability ranges (areas)

1628 *stability range of operating process*

	ISO 17540:2016	2.14 Operating process in chamber (gas generator) 2.14.23	TC20/SC14/WG2

2058 values range (area) of the chamber (gas generator) operating mode parameters that provide a stable process

1629 *stabilizing load*

	ISO 16454:2007	3.27	TC20/SC14/WG1

2059 load which decreases compressive stresses if applied in conjunction with destabilizing loads

1630 *stable operating process*

	ISO 17540:2016	2.14 Operating process in chamber (gas generator) 2.14.20	TC20/SC14/WG2

2060 operating process in the chamber (gas generator) without pressure self-oscillations

1631 *stage*

	ISO 20892:2018	3.7	TC20/SC14/WG5

2061 <modernization> set of works characterized by planning and funding to obtain specific outcomes for the development, testing and conformity assessment of product performance to meet the requirements and get customer (3.5) acceptance

1632 *staggered scanning*

	ISO 10830:2011	3.8	TC20/SC14/WG6

2062 scanning method used in incident-angle scanning in which setting angles (data collection points) form a hexagonal lattice such that the number of scanning points is less than in the case of orthogonal scanning
NOTE Here, the scanning points are placed in a zigzag position with respect to one another (see Figure 3 in standard).

1633 *stakeholder*

	ISO 11231:2019	3.1.11	TC20/SC14/WG5

2063 interested party (preferred term)
stakeholder (admitted term)

person or organization that can affect, be affected by, or perceive itself to be affected by a decision or activity
EXAMPLE Customers, owners, people in an organization, providers, bankers, regulators, unions, partners or society that can include competitors or opposing pressure groups.
[SOURCE: ISO 9000:2015, 3.2.3, modified — Note 1 to entry has been removed]

	ISO 18676:2017	3.9	TC20/SC14/WG5

2064 customers and/or users or those who will receive the goods or services and are the direct beneficiaries of the systems (3.6) or other interested parties who affect or are affected by the project (3.5), providing overarching constraints within which the customers' needs should be achieved

1634 *stakeholders*

	ISO 16404:2013	3.10	TC20/SC14/WG5

2065 customers and/or users

1635 *stand armour plate*

	ISO 17540:2016	2.51 Stand system elements 2.51.17	TC20/SC14/WG2

2066 stand device which protects the stand system (2.47.5) and equipment elements from damage in case of emergency event

1636 *stand base*

	ISO 17540:2016	2.47 Test stands: General 2.47.3	TC20/SC14/WG2

2067 totality of stand complexes available in an enterprise or department

1637 *stand pipeline*

	ISO 17540:2016	2.51 Stand system elements 2.51.6	TC20/SC14/WG2

2068 pipeline
stand system pipeline for propellant components connecting the elements of the stand

1638 *stand system*

	ISO 17540:2016	2.47 Test stands: General 2.47.5	TC20/SC14/WG2

2069 stand unit designed to carry out one or more specification tasks involved in stand development and engine testing

1639 *stand tank*

	ISO 17540:2016	2.51 Stand system elements 2.51.1	TC20/SC14/WG2

2070 fuel components feed stand system element which is a vessel for propellant components storage
Note 1 to entry: The time period required for the test is specified in the technical documentation.

1640 *stand tank drain post-test*

	ISO 17540:2016	2.51 Stand system elements 2.51.4	TC20/SC14/WG2

2071 tank drain
stand tank (2.51.1) used for draining the propellant component which stayed after testing in the main or launch stand tanks and propellant components pipelines

1641 *stand tank of dumping*

	ISO 17540:2016	2.51 Stand system elements 2.51.5	TC20/SC14/WG2

2072 emergency drain
stand tank (2.51.1) used to receive propellant component from the main and/or starting tanks and pipeline (2.51.6) in case of accident

1642 *standard*

	ISO 10795:2019	3.228	TC20/SC14/WG5

2073 document (3.88), established by consensus and approved by a recognized body, that provides, for common and repeated use, rules, guidelines or characteristics (3.41) for activities or their results, aimed at the achievement of the optimum degree of order in a given context
Note 1 to entry: Standards should be based on the consolidated results of science, technology and experience, and aimed at the promotion of optimum community benefits.
[SOURCE: ISO/IEC Guide 2:2004, 3.2]

1643 *standard test conditions*

STC	**ISO 15387:2005**	3.38	TC20/SC14/WG1

2074 at cell temperature of 25 °C ± 1 °C and at one solar constant AM0 irradiance of 1 367 $W \cdot m^{-2}$ as measured with an AM0 standard solar cell using the AM0 reference extraterrestrial solar spectral irradiance
NOTE Cell temperature of 28 °C only applies to 8.4.1.

	ISO 17540:2016	2.37 Test conditions 2.37.4	TC20/SC14/WG2

2075 engine test conditions where parameter values are implemented at random during initial nominal stand and engine adjustment (2.36.2)

1644 *starting stand tank*

	ISO 17540:2016	2.51 Stand system elements 2.51.3	TC20/SC14/WG2

2076 propellant stand tank
stand tank (2.51.1) used for propellant components storage required for engine test (2.27.1) and its operating conditions

1645 *state owner of the launch complex*

	ISO 20892:2018	3.11	TC20/SC14/WG5

2077 state that has jurisdiction over the launch complex

1646 *statement of work*

	ISO 10795:2019	3.229	TC20/SC14/WG5

2078 contractual document (3.88) prepared during project (3.178) initiation and planning that describes what the project needs to deliver and outlines all work required to complete the project

SOW	**ISO 17255:2014**	3.1.4	TC20/SC14/WG5

2079 contractual document prepared during project initiation and planning that describes what the project shall deliver and outlines all work required to complete the project
[SOURCE: ISO 10795:2011, definition 1.216]

1647 *static load*

	ISO 10786:2011	3.67	TC20/SC14/WG1

2080 static load (admitted term)
quasi-static load (preferred term)

load which is independent of time or are varying slowly with time, so that the dynamic response of the structure is insignificant
NOTE Quasi-static loads comprise both static and dynamic loads and are applied at a frequency sufficiently below the natural frequency of the considered part, thus being equivalent to static loads in their effects on the structure.

	ISO 14622:2000	2.5.1	TC20/SC14/WG1

2081 static load
quasi-static load

load whose magnitude and direction are independent of time, or load which vary slowly and for which the dynamic response of the structure is not significant
NOTE This load can be induced by:
- steady winds;
- aerodynamic forces;
- thrust (constant or with slow variations);
- manoeuvres;
- spin stabilization.

1648 *static strength*

	ISO 16454:2007	3.28	TC20/SC14/WG1

2082 property of a structure, characterized by its capability to withstand loads and temperature combinations without rupture, collapse, detrimental local buckling and detrimental deformation

1649 *statistical DOF*

	ISO 19924:2017	3.17	TC20/SC14/WG2

2083 number of independent variables in an estimate of some quantity

1650 *steady-state acceleration*

	ISO 15862:2009	2.9	TC20/SC14/WG2

2084 constant acceleration that generates static loads

1651 *steady-state pulse mode*

	ISO 17540:2016	2.11 Low-thrust engine operation modes 2.11.3	TC20/SC14/WG2

2085 LTE pulse mode where the pulse shape is stabilized with a constant value of the on-time frequency

1652 *sterility*

	ISO 15388:2012	3.1.46	TC20/SC14/WG6

2086 absence of viable microorganisms
NOTE Inactivated microbes can still represent an important form of biocontamination.

1653 *sterilization*

	ISO 15388:2012	3.1.47	TC20/SC14/WG6

2087 act or process of killing all forms of microbial life on and in an object
NOTE Inactivated microbes might not be eliminated and can still represent an important form of biocontamination.

1654 *stiffness*

	ISO 10786:2011	3.58	TC20/SC14/WG1

2088 ratio between an applied force and the resulting displacement

1655 *stray magnetic field*

	ISO 21494:2019	3.6	TC20/SC14/WG2

2089 magnetic field produced by the stray magnetic moment of the EUT in a powered on operational mode

1656 *stray magnetic moment*

	ISO 21494:2019	3.3	TC20/SC14/WG2

2090 magnetic moment of the EUT in zero-magnetic field environment when the EUT is in a powered on operational mode

1657 *strength*

	ISO 14622:2000	2.9	TC20/SC14/WG1

2091 ability of the structures to withstand the loads (or pressures) and the environment encountered during their se lifetime

1658 *strength failure mode*

	ISO 16454:2007	3.29	TC20/SC14/WG1

2092 condition of a structure or a structural member considered as a critical condition in accordance with stress analysis results

1659 *stress*

	ISO 11227:2012	3.1.14	TC20/SC14/WG7

2093 force exerted on a body that tends to strain or to deform its shape.

1660 *stress analysis*

ISO 16454:2007 3.30 TC20/SC14/WG1

2094 analytical procedure to determine structure stress/strain distribution, deformations and margins of safety

1661 *stress intensity factor*

ISO 14623:2003 2.60 TC20/SC14/WG1

2095 parameter used in linear elastic fracture mechanics to characterize the stress-strain behaviour at the tip of a crack contained in a linear elastic and homogeneous body

1662 *stress-corrosion cracking*

ISO 10786:2011 3.59 TC20/SC14/WG1

2096 mechanically and environmentally induced failure process in which sustained stress and chemical attack combine to initiate and/or propagate a crack or a crack-like flaw in a metal part
[ISO 21347:2005]

ISO 14623:2003 2.59 TC20/SC14/WG1

2097 mechanical-environmental induced failure process in which sustained tensile stress and chemical attack combine to initiate and propagate a crack or a crack-like flaw in a metal part

ISO 21347:2005 3.36 TC20/SC14/WG1

2098 mechanically and environmentally induced failure process in which sustained tensile stress and chemical attack combine to initiate and propagate a crack or a crack-like flaw in a metal part

1663 *stress-rupture life*

ISO 10786:2011 3.60 TC20/SC14/WG1

2099 minimum time during which a non-metallic structural item maintains structural integrity, considering the combined effects of stress level(s), time at stress level(s), and associated environments

ISO 14623:2003 2.61 TC20/SC14/WG1

2100 minimum time during which composite hardware maintains structural integrity, considering the combined effects of stress level(s), time at stress level(s), and associated environments

ISO 21648:2008 2.1.34 TC20/SC14/WG1

2101 time during which the composite maintains structural integrity considering the combined effects of stress level(s), time at stress level(s) and associated environments

1664 *structural assembly*

	ISO 10786:2011	3.65	TC20/SC14/WG1

2102 structure (preferred term)
structural assembly (admitted term)

set of mechanical components or assemblies designed to sustain (carry) internal and/or external loads or pressures; provide (maintain) stiffness, alignment, and/or stability; and provide support or containment for other systems or subsystems
NOTE The space vehicle structure is usually categorized into primary and secondary structures.

1665 *structural component*

	ISO 10786:2011	3.61	TC20/SC14/WG1

2103 mechanical part(s) in a functional hardware item designed to sustain load and/or pressure or maintain alignment
EXAMPLES Antenna support structure, instrument housing, and pressure vessel.

1666 *structural defect*

	ISO 17540:2016	2.40 Engine defects 2.40.1	TC20/SC14/WG2

2104 engine defect caused by imperfect design documentation or set design rules and/or standards breach
Note 1 to entry: The design documentation is imperfect in the case where all its performance requirements' during engine manufacturing do not provide the engine operable state in operation.

1667 *structural design*

	ISO 10786:2011	3.62	TC20/SC14/WG1

2105 process used to determine geometries/dimensions and to select materials of a structure

1668 *structural item*

	ISO 10786:2011	3.63	TC20/SC14/WG1

2106 structure, structural subsystem (assembly), or structural component
EXAMPLES Spacecraft trusses, launch vehicle fairings, pressure vessels and pressurized structures; also fasteners, instrument housing and support brackets.

	ISO 21347:2005	3.37	TC20/SC14/WG1

2107 hardware item which is designed to sustain load and/or pressure or maintain alignment
EXAMPLES Spacecraft trusses, launch vehicle fairings, pressure vessels and pressurized structures; also fasteners, instrument housing and support brackets.

1669 *structural mathematical model*

	ISO 10786:2011	3.64	TC20/SC14/WG1

2108 analytical or numerical representation of a structure
NOTE It is advisable that the model provides an adequate description of the structure's response under loads/pressures/temperatures.
[ISO 16454:2007]

ISO 16454:2007 3.32 TC20/SC14/WG1

2109 analytical or digital presentation of a structure
NOTE It is advisable that the model provides adequate description of the structure's response under loads/pressures/temperatures.

1670 *structural model*

ISO 24917:2010 3.26 TC20/SC14/WG2

2110 model representing the structural flight characteristics

1671 *structural-functional analysis of reliability*

ISO 17540:2016 2.46 Structural and functional analysis of reliability 2.46.1 TC20/SC14/WG2

2111 quantitative reliability analysis based on engine consideration as the assembly of statistically independent structural-functional elements (2.46.2)

1672 *structural-functional element*

ISO 17540:2016 2.46 Structural and functional analysis of reliability 2.46.2 TC20/SC14/WG2

2112 engine component which is nominally equipped by one of the properties necessary for its operable state provision

1673 *structure*

ISO 10786:2011 3.65 TC20/SC14/WG1

2113 structure (preferred term)
structural assembly (admitted term)

set of mechanical components or assemblies designed to sustain (carry) internal and/or external loads or pressures; provide (maintain) stiffness, alignment, and/or stability; and provide support or containment for other systems or subsystems
NOTE The space vehicle structure is usually categorized into primary and secondary structures.

ISO 16454:2007 3.31 TC20/SC14/WG1

2114 primary structure, unit attachments, pressure/loads carrying elements of pressure vessels, loads carrying elements of appendages

1674 *subcontract*

ISO 10795:2019 3.230 TC20/SC14/WG5

2115 contract (3.65) between a contractor (3.66) and their subordinate contractor in the customer-supplier chain to obtain materials (3.148) or other inputs to a product (3.173)

1675 *subcontractor*

	ISO 20892:2018	3.8	TC20/SC14/WG5

2116 <modernization>organization that makes a contract with the Executive Head (3.5) or customer (3.5) to perform part of the launch complex modernization (3.1) and is responsible for its implementation

1676 *subject matter expert*

SME	**ISO/TS 18667:2018**	3.1.13	TC20/SC14/WG5

2117 person that completed a technical education programme, was formally trained in real-world applications, and has acquired extensive experience in a technical area

1677 *substrate*

	ISO 16691:2014	3.1.14	TC20/SC14/WG6

2118 surface to which a coating material is applied or is to be applied

1678 *subsystem*

	ISO 10795:2019	3.231	TC20/SC14/WG5

2119 set of interdependent elements constituted to achieve a given objective by performing a specified function (3.110), but that does not, on its own, satisfy the customer's (3.78) requirement (3.201)

	ISO 11892:2012	3.1.1	TC20/SC14/WG2

2120 assembly or group of electrical, thermal and/or mechanical units which is dedicated to specific functions of a spacecraft system (SC)

	ISO 14302:2002	3.1.6	TC20/SC14/WG1

2121 equipment/subsystem
any electrical, electronic, or electromechanical device or integration of such devices intended to operate as an individual unit and performing a specific set of functions
NOTE Generally, a piece of equipment is housed within a single enclosure, while a subsystem may consist of several interconnected units.

	ISO 14950:2004	3.2.23	TC20/SC14/WG3

2122 any combination of units within the spacecraft platform that fulfils a well-defined and usually self-contained set of on-board functions

	ISO 14952-1:2003	2.29	TC20/SC14/WG6

2123 two or more assemblies (2.2) joined together to perform a definite function
NOTE A subsystem should be capable of independent operation when interconnected into a system (2.30).

	ISO 15864:2004	3.1.10	TC20/SC14/WG2

2124 assembly of functionally related units

1679 *subsystems to spacecraft interface control document*

	ISO 11892:2012	3.1.3	TC20/SC14/WG2

2125 subsystems/units to spacecraft interface control document

set of documents that defines and controls the electrical, thermal, and mechanical interface requirements between a subsystem and the spacecraft system (SC)
NOTE Figure 1 illustrates the hierarchy of a space system and the ranges where various interface control documents are applicable.

1680 *success*

	ISO 26871:2012	3.1.40	TC20/SC14/WG1

2126 simultaneous achievement by all characteristics of required performance

1681 *suitability*

	ISO 18257:2016	3.2	TC20/SC14/WG1

2127 degree to which a product meets its requirements

1682 *Sun synchronous orbits*

	ISO 17851:2016	3.2 Terms related to orbits 3.2.2	TC20/SC14/WG4

2128 low polar (Sun synchronous) orbits

orbits with the altitude of 600 km to 800 km and the inclination of 85° to 97°

1683 *sunspot number*

	ISO 16457:2014	2.6	TC20/SC14/WG4

2129 R, alternatively called Ri or Rz, is a daily index of sunspot activity defined as R=k(10g+s) where s is the number of individual spots, g is the number of sunspot groups, and k is an observatory factor

W	**ISO/TR 18147:2014**	2	TC20/SC14/WG4

2130 Wolf (sunspot) number
W = k(10g+f), where g is sunspot group number; f is the total sunspot number on the visible solar disc. k is the coefficient adjusting various observation conditions.

R *Ri*	**ISO/TS 21979:2018**	3.6	TC20/SC14/WG4

2131 daily index of sunspot activity, defined as R=k (10g + s) where s is the number of individual spots, g the number of sunspot groups, and k is an observatory factor
[SOURCE: ISO 16457:2014, modified - synonymous terms editorially revised for alignment with ISO/ IEC Directives Part 2]

1684 *supplier*

	ISO 10795:2019	3.232	TC20/SC14/WG5

2132 <space system> organization (3.163) or person that provides a product (3.173) as part of a business agreement (3.32)
Note 1 to entry: A supplier can be internal or external to the customer (3.78) organization.
[SOURCE: EN 16601-00-01:2015, 2.3.209, modified – The domain <space system> has been added.]

	ISO 14621-2:2019	3.1.6	TC20/SC14/WG5

2133 organization or person that provides a product as part of a business agreement
[SOURCE: EN 16601-00-01:2015, 2.3.209]

	ISO 15388:2012	3.1.48	TC20/SC14/WG6

2134 organization or person that provides a product
EXAMPLE Producer, distributor, retailer or vendor of a product, or provider of a service or information.
[ISO 9000:2005, 3.3.6]

	ISO 16091:2018	3.1.21	TC20/SC14/WG5

2135 organization that provides a product or a service
EXAMPLE Producer, distributor, retailer or vendor of a product or a service.
Note 1 to entry: A supplier can be internal or external to the organization.
Note 2 to entry: In a contractual situation a supplier is sometimes called "contractor".
[SOURCE: ISO 9000:2015]

1685 *support elements*

	ISO 16091:2018	3.1.22	TC20/SC14/WG5

2136 hardware and software products, together with the necessary human resources, which are essential to enable the system to achieve its required performance from delivery to disposal
EXAMPLE Electrical ground support equipment.
Note 1 to entry: Some items, during different phases of the project, can start as part of the system and later, modified as necessary, become support elements.

1686 *support system*

	ISO 10795:2019	3.233	TC20/SC14/WG5

2137 generic infrastructure (3.126) and services used to support the development (3.85) and operation of space system (3.223) elements
EXAMPLE Ground stations and associated networks, orbit computing facilities, test (3.239) centres, astronaut centre, launch facilities.
Note 1 to entry: Items (3.134) can be part of other segments during their development and later become part of the support segment when used (e.g. tracking network).

1687 *surface charging*

	ISO 11221:2011	2.28	TC20/SC14/WG4

2138 deposition of electrical charges onto, or their removal from, external surfaces

	ISO 19923:2017	3.5	TC20/SC14/WG4

2139 deposition onto or the removal of electrical charges from external surfaces of the spacecraft

1688 *surface cleanliness*

	ISO 15388:2012	3.1.49	TC20/SC14/WG6

2140 level of contamination on a significant surface

1689 *surface flashover*

	ISO 11221:2011	2.29	TC20/SC14/WG4

2141 surface discharge propagating laterally over a dielectric material
NOTE Surface flashover is sometimes called a “brushfire discharge”.

1690 *surface impact factors*

	ISO 17851:2016	3.4 Terms related to penetration depth of affecting space factors 3.4.1	TC20/SC14/WG4

2142 space factors which impact changes in the characteristics or properties of near-surface layers of materials (with depth of less than ~100 μm)
EXAMPLE Plasma, ultraviolet (UV) and vacuum ultraviolet (VUV), and hard microparticles.

1691 *surface properties*

	ISO 15856:2010	3.1.17	TC20/SC14/WG4

2143 properties of a material which are defined by the physico-chemical and morphological structure of its surface
NOTE The depth or thickness that constitutes surface properties depends upon the type of material and particular property.

1692 *survival mode*

	ISO 14950:2004	3.2.24	TC20/SC14/WG3

2144 non-operational, temporary and safe-life mode of a spacecraft, defined to avoid its loss in case of contingency (catastrophic or critical failure, aggressive environment, etc.)

1693 *sustainability*

	ISO 18197:2015	3.2	TC20/SC14/WG1

2145 measurement anomaly at some reference point should make no influence on the augmentation data generation

1694 *switching and measurement signal transformation compartment*

	ISO 17540:2016	2.52 Stand compartmen ts 2.52.8	TC20/SC14/WG2

2146 bench building designed to place the transforming and switching equipment of the information- measuring complex

1695 *sympathetic firing*

	ISO 26871:2012	3.1.41	TC20/SC14/WG1

2147 firing of other explosive devices due to the output of any other

1696 *synchrotron radiation*

	ISO 15856:2010	3.1.18	TC20/SC14/WG4

2148 continuous radiation created by the acceleration of relativistic charged particles, as in a synchrotron or storage ring
NOTE Synchrotron radiation is a practical energy source of photons.

1697 *synergistic effects*

	ISO 17851:2016	3.5 Terms related to physical and chemical mechanisms of space environment effects on materials 3.5.2	TC20/SC14/WG4

2149 effects appearing with the simultaneous or sequential impact of several space environment factors when the final effect is not equal to the sum of the effects from the individual factors

1698 *system*

	ISO 10795:2019	3.234	TC20/SC14/WG5

2150 set of interrelated or interacting functions (3.110) constituted to achieve a specified objective
[SOURCE: EN 16601-00-01:2015, 2.3.212]

	ISO 14952-1:2003	2.30	TC20/SC14/WG6

2151 series of subsystems (2.29) joined together to perform a definite function

	ISO 16091:2018	3.1.23	TC20/SC14/WG5

2152 set of interdependent elements constituted to achieve a given objective by performing a specified function
Note 1 to entry: The system is considered to be separated from the environment and other external systems by an imaginary surface which cuts the links between them and the considered system. Through these links, the system is affected by the environment, is acted upon by external systems, or acts itself on the environment or the external systems.
[SOURCE: ISO 14620-1:2002, 3.1.28]

	ISO 18676:2017	3.6	TC20/SC14/WG5

2153 set of interrelated or interacting elements

1699 *system component*

	ISO 17540:2016	2.47 Test stands: General 2.47.6	TC20/SC14/WG2

2154 stand system unit that performs the specified functions and is the lowest level of assembly

1700 *system documentation list*

SDL	**ISO 26870:2009**	3.19	TC20/SC14/WG3

2155 list of all operational documents necessary for a given facility, system or item of equipment

1701 *system of post-test processing engine*

	ISO 17540:2016	2.50 Post-test processing 2.50.2	TC20/SC14/WG2

2156 system intended for the decontamination of propellant components residuals and combustion products

1702 *system of systems*

	ISO 16091:2018	3.1.24	TC20/SC14/WG5

2157 integration of existing and/or new systems into an over-arching system with capabilities that are greater than the sum of the capabilities of the constituent component systems

	ISO/TS 18667:2018	3.1.14	TC20/SC14/WG5

2158 integration of existing and/or new systems into an over-arching system with capabilities that are greater than the sum of the capabilities of the constituent component systems

1703 *System safety*

	ISO 14620-1:2018	3.1.19	TC20/SC14/WG5

2159 application of engineering and management principles, criteria, and techniques to optimize all aspects of safety within the constraints of operational effectiveness, time, and cost throughout all phases of the system life cycle

	ISO 16091:2018	3.1.25	TC20/SC14/WG5

2160 application of engineering and management principles, criteria, and techniques to optimize all aspects of safety within the constraints of operational effectiveness, time, and cost throughout all phases of the system life cycle

1704 *system threat analysis energy level*

	ISO 10786:2011	3.66	TC20/SC14/WG1

2161 maximum expected energy level due to an impact resulting from a credible threat event determined in a system threat analysis

1705 *systems engineering*

	ISO 10795:2019	3.235	TC20/SC14/WG5

2162 interdisciplinary approach governing the total technical and managerial effort required to transform a set of stakeholder needs, expectations, and constraints (3.61) into a solution and to support that solution throughout its life
[SOURCE: ISO/IEC/IEEE 24748-1:2018, 3.57].

	ISO 14621-1:2019	3.1.8	TC20/SC14/WG5

2163 interdisciplinary approach governing the total technical and managerial effort required to transform a set of stakeholder needs, expectations, and constraints into a solution and to support that solution throughout its life
[SOURCE: ISO/IEC/IEEE 24748-1:2018, 3.57]

	ISO 16404:2013	3.11	TC20/SC14/WG5

2164 interdisciplinary approach and means to enable the realization of successful systems, starting with the definition of customer needs, the identification of product functionality, and the intended validation very early in the lifecycle Note 1 to entry: Systems Engineering considers both the business and the technical needs of all customers with the goal of providing a quality product that meets the user's needs.

	ISO 18676:2017	3.7	TC20/SC14/WG5

2165 interdisciplinary approach governing the total technical and managerial effort required to transform a set of stakeholder needs, expectations and constraints into a solution and to support that solution throughout its life
[SOURCE: ISO 24748-1:2016, 2.56]

1706 *systems engineering management*

	ISO 10795:2019	3.236	TC20/SC14/WG5

2166 discipline to ensure that system engineering (3.235) is properly applied and can be divided in planning, control, assessment (3.24) and decision analysis (3.12), including management (3.146) tools like work breakdown structures (3.246), risk management (3.208), requirements (3.201) traceability and reviews (3.203)
[SOURCE: ISO 18676:2017, 3.8]

	ISO 18676:2017	3.8	TC20/SC14/WG5

2167 discipline to ensure that system engineering (3.7) is properly applied and can be divided in planning, control, assessment and decision analysis, including management tools like work breakdown structures, risk management, requirements traceability and reviews

1707 *table-sat*

	ISO 19683:2017	3.1	TC20/SC14/WG1

2168 flat-sat
configuration where only units (3.4), sometimes bare circuit boards only, are laid out in atmosphere on a table while not being mounted to the satellite structure

1708 *tail service mast*

	ISO 15389:2001	3.17	TC20/SC14/WG3

2169 retractable structure used to provide umbilical requirements to the aft portion (tail) of a space vehicle
NOTE Movement is usually a rotation about a pivot point away from the vehicle.

1709 *tailoring*

	ISO 10795:2019	3.237	TC20/SC14/WG5

2170 process (3.171) by which individual requirements (3.201) of specifications (3.227), standards (3.228), and related documents (3.88) are evaluated and made applicable to a specific project (3.178) by selection and, in some exceptional cases, modification (3.156) of existing or addition of new requirements

	ISO 17546:2016	3.36	TC20/SC14/WG1

2171 process of choosing design characteristics/tolerances and test environments, methods, procedures, sequences and conditions, and altering critical design and test values, conditions of failure, etc., to take into account the effects of the particular environmental forcing functions to which material normally is subjected
during its life cycle [7]

[7] MIL-STD-810. DEPARTMENT OF DEFENSE TEST METHOD STANDARD ENVIRONMENTAL ENGINEERING CONSIDERATIONS AND LABORATORY TESTS".

	ISO 23460:2011	3.4	TC20/SC14/WG5

2172 process by which individual requirements of specifications, standards and related documents are evaluated and made applicable to a specific project by selection, and in some exceptional cases, modification of existing or addition of new requirements
[ISO 10795:2011, definition 1.206]

	ISO 27025:2010	3.1.3	TC20/SC14/WG5

2173 process by which individual requirements of specifications, standards and related documents are evaluated and made applicable to a specific project by selection, and in some exceptional cases, modification of existing or addition of new requirements

1710 *tank drain*

	ISO 17540:2016	2.51 Stand system elements 2.51.4	TC20/SC14/WG2

2174 stand tank drain post-test
stand tank (2.51.1) used for draining the propellant component which stayed after testing in the main or launch stand tanks and propellant components pipelines

1711 *target*

	ISO 11227:2012	3.1.13	TC20/SC14/WG7

2175 specimen
representative sample of a spacecraft material that is used in impact experiments

1712 *task*

	ISO 16091:2018	3.1.26	TC20/SC14/WG5

2176 specific piece of work to be done

1713 *technical compartment*

	ISO 17540:2016	2.52 Stand compartments 2.52.2	TC20/SC14/WG2

2177 stand compartment intended for technical equipment

1714 *technical data package*

TDP	**ISO 10789:2011**	3.5	TC20/SC14/WG5

2178 ZIP file containing structured collection of files with their related metadata, to be exchanged between information systems
NOTE Adapted from ISO 10303-232

1715 *technical project on development of a product*

	ISO 24917:2010	3.11	TC20/SC14/WG2

2179 initial document establishing a complex of technical requirements to created products, and to the contents, volume and terms of performance of design experiment works as well

1716 *technical requirements*

TR	**ISO 20892:2018**	3.12	TC20/SC14/WG5

2180 <modernization> document that establishes a set of technical requirements for the upgrade of the whole complex or a part thereof, as well as requirements for the content, scope and terms of modernization performance

1717 *technical specification*

TS	**ISO 10795:2019**	3.238	TC20/SC14/WG5

2181 specification (3.227) expressing technical requirements (3.201) for designing and developing the solution to be implemented
Note 1 to entry: The technical specification evolves from the functional specification (3.113) and defines the technical requirements for the selected solution as part of a business agreement (3.32).
[SOURCE: ISO 21351:2005, 3.1.11]

TS	**ISO 15865:2005**	3.1.3	TC20/SC14/WG5

2182 specification that establishes the exact required values for performance, operating environments, and other features (including non-functional features) for a product
NOTE This definition accords with that given in ISO 21351.

	ISO 21351:2005	3.1.11	TC20/SC14/WG5

2183 specification expressing technical requirements for designing and developing the solution to be implemented
NOTE The technical specification evolves from the functional specification and defines the technical requirements for the selected solution as part of a business agreement.

	ISO 24917:2010	3.12	TC20/SC14/WG2

2184 specification expressing technical requirements for designing and developing the solution to be implemented
NOTE The technical specification evolves from the functional specification and defines the technical requirements for the selected solution as part of a business agreement.
[ISO 21351:2005, definition 3.1.11]

1718 *technical state qualification*

	ISO 17540:2016	2.39 Engine reliability 2.39.4	TC20/SC14/WG2

2185 identification of the type of engine operation condition

1719 *technological test*

	ISO 17540:2016	2.34 Types of engine tests: Test purposes 2.34.7	TC20/SC14/WG2

2186 check test of each sample engine for the purpose of checking the manufacture technological process Note 1 to entry: The technological test may be firing or cold, with or without reassembly.

1720 *technology*

	ISO 16290:2013	2.19	TC20/SC14/WG5

2187 application of scientific knowledge, tools, techniques, crafts, systems or methods of organization in order to solve a problem or achieve an objective

1721 *technology insertion strategy*

	ISO 14621-1:2019	3.1.9	TC20/SC14/WG5

2188 decision making process to assess current and future part availability and trends, which leads to a decision regarding emerging or new technology insertion
Note 1 to entry: This process is used in the concept development phase, but also impacts the production and field support phases.

1722 *Techno-medical requirements for human habitation environment*

	ISO 17763:2018	3.3	TC20/SC14/WG6

2189 complex of biomedical, hygiene/sanitary, ergonomic and design and construction requirements
Note 1 to entry: Those requirements take into account physiological and social-psychological human needs in the process of hardware development and operation in order to guarantee specified living conditions aboard space systems.

1723 *Techno-medical requirements for human habitation environments*

	ISO 16157:2018	3.3	TC20/SC14/WG6

2190 complex of biomedical, hygiene/sanitary, ergonomic and design requirements
Note 1 to entry: Those requirements take into account physiological and social-psychological human needs in the process of hardware development and operation in order to guarantee specified living conditions aboard space systems.
[SOURCE: ISO 17763, 3.3]

	ISO 16726:2018	3.3	TC20/SC14/WG6

2191 complex of biomedical, hygiene/sanitary, ergonomic and design issues
Note 1 to entry: Those requirements take into account physiological and social-psychological human needs in the process of hardware development and operation in order to guarantee specified living conditions aboard space systems.
[SOURCE: ISO 17763, 3.3]

1724 *tee (time) minus zero*

T-0	**ISO 15389:2001**	3.16	TC20/SC14/WG3

2192 last moment in the launch countdown, measured in seconds, at which time the launch vehicle lifts off the ground

1725 *telecommand criticality*

	ISO 14950:2004	3.2.25	TC20/SC14/WG3

2193 importance of a telecommand in terms of the nature and significance of its on-board effect
NOTE Telecommand criticality levels are categorized as Levels A to D as defined in 3.2.25.1 to 3.2.25.4.

3.2.25.1
Level A
forbidden telecommand
telecommand that is not expected to be used for nominal or foreseeable contingency operations, that is included for unforeseen contingency operations, and that could cause irreversible damage if executed at the wrong time or in the wrong configuration

3.2.25.2
Level B
critical telecommand
telecommand that, if executed at the wrong time or in the wrong configuration, could cause irreversible loss or damage for the mission (i.e. endanger the achievement of the primary mission objectives)

3.2.25.3
Level C
vital telecommand
telecommand that is not a critical telecommand but is essential to the success of the mission and, if sent at the wrong time, could cause momentary loss of the mission

3.2.25.4
Level D
all the remaining commands

1726 *telecommand function*

	ISO 14950:2004	3.2.26	TC20/SC14/WG3

2194 operationally self-contained control action that can comprise or invoke one or more lower level control actions

1727 *telemetry data transmitting system*

	ISO 14620-3:2005	3.6	TC20/SC14/WG5

2195 combination of flight- or space-based hardware and software, designed, installed or operated for down-linking vehicle and flight system performance and health data to flight safety operators

1728 *telemetry measurement programme*

	ISO 24917:2010	3.22	TC20/SC14/WG2

2196 programme document establishing the composition of telemetry measurement hardware born set on space launch vehicle, launch pad and positioned along the flight route necessary for satisfying the measurement requirements as well as places and orientation of sensors arrangement and their characteristics, frequency bands, minimal frequency of sensor polling

1729 *television control equipment*

	ISO 17540:2016	2.49 Stand systems 2.49.5	TC20/SC14/WG2

2197 stand system (2.47.5) intended for the engine or its unit television observation when preparing for a test and while testing and during post-launch operation

1730 *temperature control propellant compartment*

ISO 17540:2016	2.52 Stand compartmen ts 2.52.6	TC20/SC14/WG2

2198 stand building designed to accommodate the water tanks and other elements of the water supply system (2.49.14) for testing of the engine, its components and/or stand devices

1731 *temporary sustained arc*

ISO 11221:2011	2.30	TC20/SC14/WG4

2199 passage of current from an external source through a conductive path that lasts longer than a primary discharge current pulse but terminates without leaving a permanent conductive path
See Figure 1 in standard.

1732 *tensile strength*

ISO 11227:2012	3.1.15	TC20/SC14/WG7

2200 power to resist tensile stress
NOTE The tensile strength of brittle materials is about two orders of magnitude less than the tensile strength of metals.

1733 *tensile stress*

ISO 11227:2012	3.1.16	TC20/SC14/WG7

2201 stress on a material produced by pulling forces along an axis, which tends to extend or break the material

1734 *test*

ISO 10795:2019	3.239	TC20/SC14/WG5

2202 <space system> formal process (3.171) of evaluating the performance (3.166) of a system (3.234) or item (3.134) by manual or automatic means to identify differences among specified, expected, and actual results

ISO 17566:2011	2.7	TC20/SC14/WG2

2203 determination of one or more characteristics according to a procedure by which requirements are verified through measurement of product performance and functions during and/or after exposure to simulated environmental loads

ISO 24917:2010	3.15	TC20/SC14/WG2

2204 formal process of exercising or putting to trial a system or item by manual or automatic means to identify differences between specified, expected and actual results

1735 *test article*

ISO 15864:2004	3.1.11	TC20/SC14/WG2

2205 spacecraft, subsystem or unit on which a test is conducted

ISO 19683:2017	3.3	TC20/SC14/WG1

2206 satellite or unit (3.4) on which a test is conducted

1736 *test block*

	ISO 22137:2020	3.1.5	TC20/SC14/WG5

2207 aggregation of several tests grouped by discipline
Note 1 to entry: Typical test blocks for space segment elements are (not all):
– integration;
– leak pressure;
– EMC conducted;
– thermal;
– functional and performance test

1737 *test campaign*

	ISO 18322:2017	3.8	TC20/SC14/WG2

2208 series of test processes starting with the arrival of the test specimen in the space test centre and ending with its departure from the space test centre
Note 1 to entry: In the context of test centres.

1738 *test chamber*

	ISO 14624-3:2005	3.9	TC20/SC14/WG6

2209 apparatus into which the sample container is placed during thermal conditioning

1739 *test conclusions*

	ISO 14624-6:2006	3.8	TC20/SC14/WG6

2210 those results that are reported on the reactivity test report form

1740 *test conditions*

	ISO 17540:2016	2.37 Test conditions 2.37.1	TC20/SC14/WG2

2211 set of engine operating modes, external influencing factors and operating time during the test

	ISO 24917:2010	3.16	TC20/SC14/WG2

2212 combination of effects of factors, or object operation conditions, or both, during the test

1741 *test cyclogram*

	ISO 17540:2016	2.36 Test technology 2.36.1	TC20/SC14/WG2

2213 graphical representation and/or numerical description of the engine test condition changes program

1742 *test defect*

	ISO 17540:2016	2.40 Engine defects 2.40.4	TC20/SC14/WG2

2214 non-conformity of engine testing conditions to the design documentation requirements

1743 *test equipment*

	ISO 17540:2016	2.47 Test stands: General 2.47.4	TC20/SC14/WG2

2215 stand equipment designed to provide engine test conditions

1744 *test facility*

	ISO 15864:2004	3.1.12	TC20/SC14/WG2

2216 location (including equipment, fixture and instrumentation) capable of performing a test

	ISO 18322:2017	3.9	TC20/SC14/WG2

2217 technical plant to provide specific simulated conditions for testing equipment for space projects and applications, including test connections and instrumentation attached as necessary to perform the test
Note 1 to entry: Test facility includes test equipment and associated infrastructure, including supplies.

1745 *test fluid*

	ISO 14952-1:2003	2.31	TC20/SC14/WG6

2218 fluid (2.11), which is either a liquid solvent or an aqueous solution, that is utilized to determine the fluid system wetted-surface cleanliness level

1746 *test level tolerances*

	ISO 19924:2017	3.14	TC20/SC14/WG2

2219 allowance of superior limit and inferior limit of a test level

1747 *test metrological provision*

	ISO 24917:2010	3.17	TC20/SC14/WG2

2220 establishment and application of scientific and organizational basis, technical means, rules and standards necessary for achieving the measurement unity demanded, precision, completeness, operativeness and the reliability of parameters control and technical characteristics of items

1748 *test mock-up*

	ISO 24917:2010	3.25	TC20/SC14/WG2

2221 test mock-up (model)
structurally, or physically, or structurally and physically similar item presenting a simplified reproduction of a test object or its part intended for test

1749 *test mock-up model*

	ISO 24917:2010	3.25	TC20/SC14/WG2

2222 test mock-up (model)
structurally, or physically, or structurally and physically similar item presenting a simplified reproduction of a test object or its part intended for test

1750 *test object*

	ISO 24917:2010	3.28	TC20/SC14/WG2

2223 item under test

1751 *test personnel*

	ISO 18322:2017	3.10	TC20/SC14/WG2

2224 staff developing, maintaining or operating a test process

1752 *test process*

	ISO 18322:2017	3.11	TC20/SC14/WG2

2225 set of activities necessary to perform a test, or a series of tests, to comply with the requirements specified in the business agreement
Note 1 to entry: This includes, but is not limited to, test design, planning, preparation, acceptance, performance, reporting, reviewing and recording.

1753 *test prototype of rocket and space technology item*

	ISO 24917:2010	3.24	TC20/SC14/WG2

2226 item produced in the research and development process applying the newly developed working engineering and technological documentation for test verification of the conformity of its parameters and characteristics with the requirements specified in statement of work to research and development and correctness of adopted technical solutions

1754 *test specimen*

	ISO 18322:2017	3.12	TC20/SC14/WG2

2227 spacecraft, subsystem, item or device under test
Note 1 to entry: This term is a synonym of test article and test item.

1755 *test supervision*

	ISO/TR 17400:2003	3.9	TC20/SC14/WG3

2228 acceptance team
test supervision

group of experts formed by the customer (organization, company, etc.) with the goal of coordinating work during specific testing or acceptance phases

1756 *test type*

	ISO 24917:2010	3.29	TC20/SC14/WG2

2229 classified test grouping identified according to a certain attribute

1757 *test, assembly and inspection record file*

TAIR file	**ISO 26870:2009**	3.20	TC20/SC14/WG3

2230 collection of test operations, maintenance, modification, problem report or inspection documentation of a facility, system or item of equipment
NOTE Two or more TAIR files located in the same place can be referred to as a “TAIR station”.

1758 *testability*

	ISO 14950:2004	3.1.10	TC20/SC14/WG3

2231 capability and ease with which the functions of the spacecraft and its interfaces and compatibility with ground systems can be verified and validated
NOTE In particular, this relates to functions that do not form part of the current operational chains (i.e. redundant functions).

	ISO 18257:2016	3.4	TC20/SC14/WG1

2232 ability to perform function and performance testing of the circuit, position the failure of the circuit and select qualified circuit chip as soon as possible

1759 *thermal control coating*

TCC	**ISO 16691:2014**	3.1.15	TC20/SC14/WG6

2233 coating that is used to maintain certain temperature conditions of an object by way of establishing the balance between the heat absorbed from an environment and/or emitted by internal heat sources and the energy radiated by object's surface in an environment

1760 *thermal engine*

	ISO 17540:2016	2.6 Low-thrust engine types by way of work process 2.6.5	TC20/SC14/WG2

2234 LTE (2.1.3) where the conversion of propellant in the gaseous products of chemical reactions is affected by heating the fuel from an external source of energy which increases their rate of expiration
Note 1 to entry: Energy is fed to the propellant or products of chemical reactions.

1761 *thermal lag*

	ISO 17540:2016	2.19 Flow in nozzle 2.19.6	TC20/SC14/WG2

2235 temperature difference of the condensed phase particle and the gaseous environment in a nozzle (2.12.16)

1762 *thermal pressure chamber*

	ISO 17540:2016	2.51 Stand system elements 2.51.15	TC20/SC14/WG2

2236 pressure chamber (2.51.14) where the temperature can be changed and/or maintained to the preset temperature

1763 *thermal protection*

	ISO 17540:2016	2.26 Engine thermal protectin 2.26.2	TC20/SC14/WG2

2237 set of measures implemented in the engine and rocket design that provides an acceptable thermal state

1764 *thermal runaway*

	ISO 17546:2016	3.37	TC20/SC14/WG1

2238 uncontrollable condition whereby a cell or battery shall overheat and reach very high temperatures in very short periods (seconds) through internal heat generation caused due to an internal short or due to an abusive condition [3]

[3] JSC20793 rev.B, ”CREWED SPACE VEHICLE BATTERY SAFETY REQUIREMENTS”

1765 *thermal test*

	ISO 17540:2016	2.35 Types of tests specific for low-thrust engines 2.35.1	TC20/SC14/WG2

2239 thermocatalytic or thermal LTE test without fuel delivery, with heat supply from an external source

1766 *thermal-vacuum test*

	ISO 17540:2016	2.35 Types of tests specific for low-thrust engines 2.35.2	TC20/SC14/WG2

2240 LTE vacuum test at a specified temperature of fuel components and design elements

1767 *thermo-catalytic engine*

	ISO 17540:2016	2.6 Low-thrust engine types by way of work process 2.6.2	TC20/SC14/WG2

2241 catalytic LTE where the catalyst is heated by the external heat source

1768 *thermosphere*

	ISO 14222:2013	2.3	TC20/SC14/WG4

2242 region of the atmosphere between the temperature minimum at the mesopause (~90 km) and the altitude where the vertical scale height is approximately equal t o the mean free path (400 - 600 km) altitude, depending on solar and geomagnetic activity levels

1769 *thermostatic control system*

	ISO 17540:2016	2.49 Stand systems 2.49.16	TC20/SC14/WG2

2243 stand system (2.47.5) that controls the temperature of the engine and propellant components

1770 *thin-film specimen*

	ISO 14624-1:2003	3.4	TC20/SC14/WG6

2244 specimen with a total thickness of less than 0,25 mm
NOTE Fabrics or coatings applied to a substrate are excluded.

1771 ***threaded connection***

	ISO 15389:2001	3.18 (Amendmen t 1)	TC20/SC14/WG3

2245 connection at which halves of connectors (3.2) or couplings (3.3) are mated by means of a thread on each of the halves

1772 ***threshold limit valve***

TLV	ISO 14952-1:2003	2.32	TC20/SC14/WG6

2246 maximum average daily dosage, based on an 8-h day, 5-day week, to which an average worker may t exposed to hazardous chemicals without harmful effect
NOTE 1 The TLV is a time-weighted average concentration.
NOTE 2 The TLV is normally expressed in parts of the gas or vapour in microlitres per litre.

1773 ***threshold probability***

	ISO 14620-3:2005	3.7	TC20/SC14/WG5

2247 probability that loss or damage will exceed a specified level
NOTE Threshold probability is a quantitative measure that represents the probability of occurrence associated with unplanned events or levels of damage caused by launch-related activities.

1774 ***through-bulkhead initiator***

TBI	ISO 26871:2012	3.1.43	TC20/SC14/WG1

2248 device for transfer of detonating input to detonating or deflagrating output across a hermetically sealed barrier

1775 ***thrust build-up time***

	ISO 17540:2016	2.9 Low-thrust engine performance 2.9.15	TC20/SC14/WG2

2249 time interval from the ignition signal to the moment when the thrust or chamber pressure reaches a value of 90 % of the steady-state thrust or the chamber pressure

1776 ***thrust coefficient***

	ISO 17540:2016	2.7 General parameters and performance of engine 2.7.18	TC20/SC14/WG2

2250 ratio of chamber thrust to the product of the nozzle stagnation pressure (or chamber total pressure at nozzle inlet) and the area of nozzle throat

1777 ***thrust complex***

Reference number of documents	N clause/subclause	TC/SC/WG
ISO 17540:2016	2.7 General parameters and performance of engine 2.7.22	TC20/SC14/WG2

2251 ratio of engine thrust chamber pressure and the product of combustion products in a given section of the chamber (2.2.1) for an area of minimum section of the nozzle (2.12.16)
Note 1 to entry: Thrust complex is also equal to the ratio of camera-specific impulse to consumable complex (2.7.19).

1778 *thrust delay*

Reference number of documents	N clause/subclause	TC/SC/WG
ISO 17540:2016	2.9 Low-thrust engine performance 2.9.16	TC20/SC14/WG2

2252 time interval from the cut-off signal until the thrust or chamber pressure decreases to 10 % of steady- state thrust or chamber pressure

1779 *thrust measuring unit*

Reference number of documents	N clause/subclause	TC/SC/WG
ISO 17540:2016	2.51 Stand system elements 2.51.16	TC20/SC14/WG2

2253 stand device for measuring the force developed by an engine when tested

1780 *total coefficient of specific impulse*

Reference number of documents	N clause/subclause	TC/SC/WG
ISO 17540:2016	2.7 General parameters and performance of engine 2.7.20	TC20/SC14/WG2

2254 coefficient of specific impulse (2.7.16) defined at the mixture ratio (2.7.5) to be the maximum ideal value

1781 *total dose*

Reference number of documents	N clause/subclause	TC/SC/WG
ISO 21980:2020	3.6	TC20/SC14/WG4

2255 total absorbed dose (3.4) received by components or materials to a specific point

1782 *total electron content*

TEC

Reference number of documents	N clause/subclause	TC/SC/WG
ISO 16457:2014	2.10	TC20/SC14/WG4

2256 integral number of electrons in the column from a lower altitude boundary to an upper boundary
Note 1 to entry; Typically the integral is taken from the lower boundary of the ionosphere (65 km during daytime and 80 km during night time) to the plasmapause.
Note 2 to entry: It is expressed in units of 10^{16}
electrons m^{-2} (TECU).

1783 *total hydrocarbon (as methane)*

Reference number of documents	N clause/subclause	TC/SC/WG
ISO 15859-4:2004	3.1	TC20/SC14/WG6

2257 the single carbon atom equivalent

1784 total hydrocarbon as methane

	ISO 15859-1:2004	3.2	TC20/SC14/WG6
2258	total hydrocarbon content (as methane) single carbon atom equivalent		
	ISO 15859-13:2004	3.1	TC20/SC14/WG6
2259	total hydrocarbon content (as methane) single carbon atom equivalent		
	ISO 15859-2:2004	3.1	TC20/SC14/WG6
2260	total hydrocarbon content (as methane) single carbon atom equivalent		
	ISO 15859-3:2004	3.3	TC20/SC14/WG6
2261	total hydrocarbon content (as methane) single carbon atom equivalent		

1785 total hydrocarbon content

	ISO 15859-1:2004	3.2	TC20/SC14/WG6
2262	total hydrocarbon content (as methane) single carbon atom equivalent		
	ISO 15859-13:2004	3.1	TC20/SC14/WG6
2263	total hydrocarbon content (as methane) single carbon atom equivalent		
	ISO 15859-2:2004	3.1	TC20/SC14/WG6
2264	total hydrocarbon content (as methane) single carbon atom equivalent		
	ISO 15859-3:2004	3.3	TC20/SC14/WG6
2265	total hydrocarbon content (as methane) single carbon atom equivalent		

1786 total impulse

	ISO 17540:2016	2.9 Low-thrust engine performance 2.9.4	TC20/SC14/WG2
2266	thruster impulse of LTE (2.1.3) over the operating duration		

1787 total mass loss

TML	**ISO 15388:2012**	3.1.50	TC20/SC14/WG6

2267 total mass of material outgassed from a test specimen that is maintained at a specified constant temperature and operating pressure for a specified time and measured within the test chamber
NOTE TML is expressed as a percentage of the initial specimen mass.

1788 *touchdown bearings*

	ISO 21648:2008	2.1.35	TC20/SC14/WG1

2268 bearings required to act as the rotor suspension system in the non-operating mode and/or the backup suspension system in the operating mode during main suspension system failure

1789 *touchdown event*

	ISO 21648:2008	2.1.36	TC20/SC14/WG1

2269 event that can occur with flywheel modules supported on magnetic bearings whereby the rotor is unexpectedly forced onto its touchdown bearings during normal operation due to malfunction of magnetic bearings, overload or other anomaly

1790 *toxic hazard index*

T	**ISO 14624-3:2005**	3.5	TC20/SC14/WG6

2270 dimensionless ratio of the projected concentration of each offgassed product to its SMAC value and summing the ratios for all offgassed products without separation into toxicological categories, and the calculation of the T value is as follows:

$$T_{total} = C_1/ISMAC_1 + C_2/ISMAC_2 + \ldots + C_n/ISMAC_n \qquad (1)$$

where
C_1, C_2, …, C_n are the concentrations of contaminants 1, 2 and n, respectively;
$ISMAC_1$, $ISMAC_2$, …, $ISMAC_n$ are the SMAC values for contaminants 1, 2 and n, respectively
NOTE For assembled articles, concentration is calculated by dividing the total quantity of each contaminant offgassed during a test by the habitable volume of the spacecraft. For materials, the concentration is calculated by multiplying the total quantity of each contaminant offgassed per gram of material by the total mass of the material to be used in the spacecraft.
EXAMPLE Evaluating the maximum limit mass for a standard shuttle test, the total mass of material to be used is assumed to be 45 kg and the habitable volume of the spacecraft is 65 m^3.

1791 *traceability*

	ISO 10795:2019	3.240	TC20/SC14/WG5

2271 ability to trace the history, application or location of an object
Note 1 to entry: When considering a product (3.173) or a service, traceability can relate to:
– the origin of materials (3.148) and parts (3.48);
– the processing history;
– the distribution and location of the product or service after delivery.
Note 2 to entry: In the field of metrology, the definition in ISO/IEC Guide 99 is the accepted definition.
[SOURCE: ISO 9000:2015, 3.6.13]

	ISO 14200:2012	3.16	TC20/SC14/WG4

2272 ability to trace the history, application or location of that which is under consideration
[SOURCE: ISO 9000:2005]

	ISO 16404:2013	3.12	TC20/SC14/WG5

2273 ability to identify the relationship between various artefacts of the development process
EXAMPLE Artefacts of the development process include the lineage of requirements, the relationship between a design decision and the affected requirements and design features, the assignments of requirements to design features, and the relationship of test results to the original source of the requirement.
Note 1 to entry: Bidirectional traceability is required to permit top-down impact analysis and down-top traceability analysis.
Note 2 to entry: Traceability is the ability to trace the history, application, or location of that which is under consideration.
[SOURCE: ISO 10795]

1792 *tracking control segment*

	ISO 23041:2018	3.9	TC20/SC14/WG3

2274 ground system consisting of the facilities of spacecraft tracking, ranging and telemetry (TLM) monitor and command (CMD) control
Note 1 to entry: The launch segment includes the pre-launch segment, the spacecraft segment includes the mission segment and the ground segment includes the facilities and operations handbook.

1793 *trade study*

	ISO 14711:2003	2.6	TC20/SC14/WG3

2275 report on a systematic examination of multiple factors that influence the economic and technical success of a project

1794 *transfer line*

	ISO 26871:2012	3.1.42	TC20/SC14/WG1

2276 linear explosive assembly for propagation of deflagration or detonation

1795 *transfer of burning debris*

	ISO 14624-1:2003	3.5	TC20/SC14/WG6

2277 movement of burning particles from a burning specimen to adjacent materials

	ISO 14624-2:2003	4.3	TC20/SC14/WG6

2278 movement of burning particles from a burning specimen to adjacent materials

1796 *transient load*

	ISO 10786:2011	3.68	TC20/SC14/WG1

2279 load whose magnitude or direction varies with time and for which the dynamic response of the structure is significant
[ISO 14622:2000]
NOTE These loads can be induced by transportation, gusts, engine ignition or shutdown, separation, orbital docking, physical impact, or deployment of appendages.

	ISO 14622:2000	2.5.2	TC20/SC14/WG1

2280 load whose magnitude or direction varies with time and for which the dynamic response of the structure is significant
NOTE This load can be induced by:
- gusts;
- engine ignition or shutdown;
- separation;
- orbital docking;
- physical impact;
- deployment of appendages.

1797 *transient pressure*

	ISO 14622:2000	2.6.6	TC20/SC14/WG1

2281 pressure that varies with time and for which the characteristic variation time is of the same order of magnitude as the structure's significant time constant

1798 *transmittance*

τ	**ISO 16378:2013**	3.17	TC20/SC14/WG6

2282 $\tau = \Phi t / \Phi m$
where Φt is the transmitted radiant flux or luminous flux and Φm is the radiant flux or luminous flux of the incident radiation
[SOURCE: ISO 80000-7]

1799 *transonic phase*

	ISO 15862:2009	2.10	TC20/SC14/WG2

2283 flight phase when the Mach number is in the range of 0,8 to 1,2

1800 *transpiration cooling*

	ISO 17540:2016	2.25 Engine cooling 2.25.7	TC20/SC14/WG2

2284 engine internal cooling performed by injection into a gas or steam boundary layer through porous or perforated wall

1801 *transverse oscillation*

	ISO 17540:2016	2.14 Operating process in chamber (gas generator) 2.14.14	TC20/SC14/WG2

2285 pressure high-frequency self-oscillation in combustion chamber (2.12.1) in a plane that is perpendicular to the combustion chamber axis
Note 1 to entry: Distinguish the tangential, radial and mixed cross-section oscillations depending on the oscillatory motion direction.

1802 *trigger arc*

	ISO 11221:2011	2.19	TC20/SC14/WG4

2286 primary arc (preferred term)
trigger arc (admitted term)

developed phase of a primary discharge, under an inverted potential gradient, which is associated with cathodic spot formation at a metallic or semiconductor surface

1803 *triple CubeSat*

	ISO 17770:2017	3.5	TC20/SC14/WG1

2287 common three CubeSat configuration, where it is three CubeSats long connected along the longitudinal axis
Note 1 to entry: Triple CubeSat is also described as “3U”.

1804 *Tsyganenko-89 geomagnetic field model*

	ISO 17520:2016	2.4	TC20/SC14/WG4

2288 model described in Reference
[SOURCE: 3]

1805 *Turbine*

	ISO 17540:2016	2.19 Turbine pump components 2.20.3	TC20/SC14/WG2

2289 gas turbine intended for the pump drive of a turbine pump

1806 *turbo-pump*

TP	**ISO 17540:2016**	2.2 Engine units 2.2.2	TC20/SC14/WG2

2290 engine assembly designed to pump propellant into the chamber (2.2.1), gas generator sets and
automatic engine

1807 *turnaround control*

	ISO 17540:2016	2.45 Engine quality control 2.45.2	TC20/SC14/WG2

2291 between-flights control
control of a reusable engine before regular intended use

1808 *two-axis swivel scanning*

	ISO 10830:2011	3.11	TC20/SC14/WG6

2292 swivel scanning in two incident-angle axes to obtain the maximum echo height, compensating for the wave-front fluctuation induced by the uneven ultrasonic propagation characteristics of graphite
NOTE Two-axis swivel scanning is conducted in the survey of echo height of a flat-bottomed hole to set the specified sensitivity.

1809 *two-component solenoid*

	ISO 17540:2016	2.23 Automation units 2.23.3	TC20/SC14/WG2

2293 solenoid (2.23.1) having an oxidizer and a propellant cavity

1810 *ultimate load*

UL	**ISO 10786:2011**	3.69	TC20/SC14/WG1

2294 maximum design load that the structure shall withstand without rupture or collapse, which is expressed as a limit load multiplied by an ultimate design safety factor
NOTE The corresponding stress and/or strain is called ultimate stress and/or strain.

	ISO 14622:2000	2.5.7	TC20/SC14/WG1

2295 limit load multiplied by the ultimate safety factor Jr (2.10.2)

	ISO 14623:2003	2.62	TC20/SC14/WG1

2296 product of the limit load and the design ultimate factor of safety

	ISO 16454:2007	3.33	TC20/SC14/WG1

2297 limit load multiplied by ultimate design safety factor

	ISO 21347:2005	3.38	TC20/SC14/WG1

2298 product of the limit load and the design ultimate safety factor
NOTE It is the load which the structural item must withstand without rupture or collapse in the expected operating environments.

	ISO 21648:2008	2.1.37	TC20/SC14/WG1

2299 product of the limit load and the design ultimate safety factor
NOTE The ultimate load is the load that the parts in a flywheel module need to withstand without catastrophic failure in the expected environment.

1811 *ultimate pressure*

	ISO 14622:2000	2.6.3	TC20/SC14/WG1

2300 limit pressure multiplied by the ultimate safety factor Jr (2.10.2)

	ISO 14623:2003	2.16	TC20/SC14/WG1

2301 design burst pressure (preferred term)
burst pressure (admitted term)
“ultimate pressure” (admitted term)

differential pressure that pressurized hardware must withstand without burst in the applicable operational environment
NOTE Design burst pressure is equal to the product of the MEOP or MDP and a design burst factor.

	ISO 24638:2008	3.8	TC20/SC14/WG1

2302 design burst pressure (preferred term)
burst pressure (admitted term)
ultimate pressure (admitted term)

differential pressure that pressurized hardware needs to withstand without burst in the applicable operational environment
NOTE Design burst pressure is equal to the product of the maximum expected operating pressure or maximum design pressure and a design burst factor.

1812 *ultimate safety factor*

J *R*	**ISO 14622:2000**	2.10.2	TC20/SC14/WG1

2303 ratio between the allowable ultimate load (or pressure) and the limit load (or pressure)
NOTE A different approach can be used for defining a safety value when one has extensive experience of a given field of application. In this case, the authority will choose and set values for the safety factors.

J *R*	**ISO 14953:2000**	2.2.2	TC20/SC14/WG1

2304 ratio of the allowable ultimate load to the limit load

1813 *ultimate strength*

	ISO 10786:2011	3.70	TC20/SC14/WG1

2305 maximum load or stress that a structure or material can withstand without incurring rupture or collapse

1814 *Umbilical*

	ISO 15389:2001	3.19	TC20/SC14/WG3

2306 device that provides fluid (supply/return and purge) and electrical requirements at physical interfaces between ground facilities and various areas of a space vehicle

1815 *umbilical assembly*

	ISO 15389:2001	3.20	TC20/SC14/WG3

2307 mated carrier and plate containing all couplings and connectors for a specified umbilical region of the vehicle

1816 *umbilical service line*

	ISO 15389:2001	3.21	TC20/SC14/WG3

2308 any fluid line or electrical cable routed through an umbilical such as a service arm or equivalent mechanism that is to be disconnected prior to engine ignition or at T-0 or in flight

1817 *umbilical supply device*

	ISO 15389:2001	3.22	TC20/SC14/WG3

2309 movable structure used to connect and/or disconnect the umbilical plates at various locations on a space vehicle

1818 *umbilical system*

	ISO 15389:2001	3.23	TC20/SC14/WG3

2310 functional assembly of all items required for providing fluid and electrical servicing to a launch vehicle and/or a payload
NOTE 1 This system usually includes the following:
- service arms or equivalent umbilical supply device mechanisms;
- umbilical carriers and plates;
- couplings and connectors, all separation, withdrawal, and retraction devices;
- control equipment;
- control fluids and electrical signals;
- all interconnecting lines across the service arms or the equivalent mechanism on the ground side.

NOTE 2 The mating-half interface for the couplings/connectors and umbilical carrier should be located on the exterior surface of the launch vehicle at an orientation compatible with the launch structure.

1819 *uncertainty*

	ISO 10795:2019	3.241	TC20/SC14/WG5

2311 lack of certitude resulting from inaccuracies of input parameters, analysis (3.12) process (3.171), or both
Note 1 to entry: Uncertainty can be represented as an interval with an upper and lower value or as an uncertainty distribution.
[SOURCE: ISO 11231:2010, 3.1.11]

	ISO 11231:2019	3.1.12	TC20/SC14/WG5

2312 lack of certitude resulting from inaccuracies of input parameters, analysis process or both
Note 1 to entry: Uncertainty can be represented as an interval with an upper and lower value or as an uncertainty distribution.

1820 *uncertainty contribution*

	ISO 11231:2019	3.1.14	TC20/SC14/WG5

2313 measure of the decrease of the uncertainty of a top consequence, when the probabilities of the events associated with the corresponding uncertainty contributor are assumed to be without uncertainty
Note 1 to entry: Uncertainty contribution indicates (and is directly proportional to) the “uncertainty reduction potential” of the uncertainty contributor. Important uncertainty contributors are events, which have a high uncertainty contribution and uncertainty reduction potential.
Note 2 to entry: Uncertainty contribution provides a systematic measure that makes it possible to rank data and information sources.

1821 *uncertainty contributor*

	ISO 11231:2019	3.1.13	TC20/SC14/WG5

2314 single event or particular set of events upon which the uncertainty of the top consequence depends
Note 1 to entry: Uncertainty contributors can be ranked relative to each other by their uncertainty contribution (3.1.13).

1822 *uncontrolled re-entry*

	ISO 16699:2015	3.8	TC20/SC14/WG3

2315 re-entry where no specific manoeuvre is used to control the time and location of the re-entry point
Note 1 to entry: Therefore, the re-entry time and location of the space object are random and unknown.

1823 *under-expansion*

	ISO 17540:2016	2.18 Nozzle operation modes 2.18.2	TC20/SC14/WG2

2316 nozzle operating mode when gas pressure at the exit section is higher than the environment pressure

1824 *undesirable event*

	ISO 10795:2019	3.242	TC20/SC14/WG5

2317 event whose consequences are detrimental to the success of the mission (3.154)

	ISO 23460:2011	3.3	TC20/SC14/WG5

2318 event whose consequences are detrimental to the success of the mission
[ISO 10795:2011, definition 1.211]

1825 *union*

	ISO 15389:2001	3.24 (Amendment 1)	TC20/SC14/WG3

2319 half of a hydraulic or gas coupling with an internal sealing surface

1826 *unit*

	ISO 10795:2019	3.93	TC20/SC14/WG5

2320 equipment
unit

integrated set of parts, and components (3.48)
Note 1 to entry: An equipment accomplishes a specific function (3.110).
Note 2 to entry: An equipment is self-contained and classified as such for the purposes of separate manufacture, procurement, drawings, specification (3.227), storage, issue, maintenance (3.145), or use.
[SOURCE: EN 16601-00-01:2015, 2.3.79]

	ISO 11892:2012	3.1.2	TC20/SC14/WG2

2321 independently handled device at the lowest level of hardware assembly that works with specified complex electrical, thermal and/or mechanical functions
NOTE Several units build up a subsystem. A single unit may occasionally comprise a subsystem by itself.

	ISO 15864:2004	3.1.13	TC20/SC14/WG2

2322 lowest level of hardware assembly for which acceptance and qualification tests are required

	ISO 16454:2007	3.34	TC20/SC14/WG1

2323 part of a vehicle which is designed mainly to provide vehicle functioning and which differs from a structure

	ISO 19683:2017	3.4	TC20/SC14/WG1

2324 lowest level of hardware assembly for which acceptance and qualification tests are required

1827 *unit impulse*

ISO 17540:2016	2.9 Low-thrust engine performance 2.9.3	TC20/SC14/WG2

2325 thruster impulse of LTE (2.1.3) or one firing (on-time (2.9.10)) in the pulse or single firing operation mode

1828 *units to spacecraft interface control document*

ISO 11892:2012	3.1.3	TC20/SC14/WG2

2326 subsystems/units to spacecraft interface control document

set of documents that defines and controls the electrical, thermal, and mechanical interface requirements between a subsystem and the spacecraft system (SC)
NOTE Figure 1 illustrates the hierarchy of a space system and the ranges where various interface control documents
are applicable.

1829 *unresolved risk*

ISO 17666:2016	3.1.15	TC20/SC14/WG5

2327 risk for which risk reduction attempts are not feasible, cannot be verified, or have proven unsuccessful
Note 1 to entry: It can also be defined as a risk remaining unacceptable

1830 *unstable operating process*

ISO 17540:2016	2.14 Operating process in chamber (gas generator) 2.14.21	TC20/SC14/WG2

2328 operating process in the chamber (gas generator) with pressure self-oscillations

1831 *untraditional spacecraft development and management philosophy*

ISO/TS 20991:2018	3.4	TC20/SC14/WG1

2329 philosophy that manages risks in cost and time effective manner to achieve low-cost and fast-delivery
Note 1 to entry: See Reference [1]

1832 *upper cut-off rigidity*

ISO 17520:2016	2.10	TC20/SC14/WG4

2330 main (upper) cut-off rigidity
access of particles of all rigidity values higher than the main cut-off rigidity is allowed for penetration from outside of the Earth’s magnetic field
Note 1 to entry: R_U is the rigidity value of the
calculated upper cut-off value, i.e. the rigidity value of the highest allowed/forbidden transition obtained in computer simulations.

1833 *upper stage vehicle*

	ISO 24917:2010	3.5	TC20/SC14/WG2

2331 upper stage of flight vehicle capable of injecting a space vehicle or vehicles into their orbit from the sub-orbital trajectory that resulted from operation of a launch vehicle

1834 *upward limiting oxygen index*

ULOI	**ISO/TS 16697:2012**	3.1	TC20/SC14/WG6

2332 oxygen concentration where approximately 50 % of samples fail the test criteria described in Clause 4

1835 *usable volume*

	ISO 14303:2002	2.6	TC20/SC14/WG2

2333 volume available to the payload within the launch-vehicle fairing or carrying structure

	ISO 17401:2004	2.1.1	TC20/SC14/WG2

2334 volume available to the payload within the LV fairing or carrying structure that the static envelope of the SC may not exceed in order to ensure that there is no physical contact between the SC and the LV in a dynamic environment

1836 *user manual*

	ISO 26871:2012	3.1.44	TC20/SC14/WG1

2335 document provided by the supplier to describe all the appropriate rules of operations

1837 *vacuum system*

	ISO 17540:2016	2.49 Stand systems 2.49.15	TC20/SC14/WG2

2336 stand system (2.47.5) that provides below atmospheric pressure in the cavities of the bench systems and rocket engines (2.1.1)

1838 *vacuum test*

	ISO 17540:2016	2.32 Types of engine tests: Test conditions 2.32.2	TC20/SC14/WG2

2337 engine firing test in a vacuum chamber at a pressure (2.7.7) below 1 Pa

1839 *vacuum ultraviolet radiation*

VUV radiation	**ISO 15856:2010**	3.1.21	TC20/SC14/WG4

2338 solar electromagnetic radiation with a wavelength in the range from 10 nm to 200 nm

1840 *validate*

	ISO 14952-1:2003	2.33	TC20/SC14/WG6

2339 validate/validation
process or method of proving that an item, subsystem (2.29), or system (2.30) meets the specific requirements

1841 *validation*

	ISO 10795:2019	3.243	TC20/SC14/WG5

2340 confirmation, through the provision (3.181) of objective evidence, that the requirements (3.201) for a specific intended use or application have been fulfilled
Note 1 to entry: The objective evidence needed for a validation is the result of a test (3.239) or other form of determination such as performing alternative calculations or reviewing documents (3.88).
Note 2 to entry: The word “validated” is used to designate the corresponding status.
Note 3 to entry: The use conditions for validation can be real or simulated.
[SOURCE: ISO 9000:2015, 3.8.13]

	ISO 14621-1:2019	3.1.10	TC20/SC14/WG5

2341 confirmation, through the provision of objective evidence, that the requirements for a specific intended use or application have been fulfilled
[SOURCE: ISO 9000:2015, 3.8.13, modified — Notes 1, 2, and 3 to entry have been deleted.]

	ISO 14952-1:2003	2.33	TC20/SC14/WG6

2342 validate/validation
process or method of proving that an item, subsystem (2.29), or system (2.30) meets the specific requirements

	ISO 16290:2013	2.20	TC20/SC14/WG5

2343 confirmation, through objective evidence, that the requirements (2.18) for a specific intended use or application have been fulfilled
Note 1 to entry: The term “validated” is used to designate the corresponding status.
Note 2 to entry: The use conditions for validation can be real or simulated.
Note 3 to entry: May be determined by a combination of test, analysis, demonstration, and inspection.
Note 4 to entry: When the element is validated it is confirmed that it is able to accomplish its intended use in the intended operational environment (2.11).
Note 5 to entry: Adapted from ISO 10795, definition 1.228.

	ISO 16781:2013	2.14	TC20/SC14/WG1

2344 confirmation, through the provision of objective evidence, that the requirements for a specific intended use or application have been fulfilled
Note 1 to entry: The term "validated" is used to designate the corresponding status.
Note 2 to entry: The use conditions for validation can be real or simulated.
Note 3 to entry: Validation may be determined by a combination of test, analysis, demonstration, and inspection.
[SOURCE: ISO 10795:2011]

	ISO 20930:2018	3.2	TC20/SC14/WG1

2345 process of assessing by independent means the quality of the data products derived from the system outputs

	ISO/TS 18667:2018	3.1.15	TC20/SC14/WG5

2346 confirmation, through objective evidence, that the requirements for a specific intended use or application have been fulfilled
Note 1 to entry: The term “validated” is used to designate the corresponding status.
Note 2 to entry: The use conditions for validation can be real or simulated.
Note 3 to entry: Validation may be determined by a combination of test, analysis, demonstration, and inspection.

1842 *varnish*

ISO 16691:2014 3.1.16 TC20/SC14/WG6

2347 clear coating material which, when applied to a substrate, forms a transparent film

1843 *veil belt zone*

ISO 17540:2016 2.12 Chamber (gas generator) components 2.12.15 TC20/SC14/WG2

2348 <for gas generator> item of the engine gas generator (2.2.4) intended for one of the propellant components to input into the wall area of fire space for the creation of a liquid or gas protective layer

ISO 17540:2016 2.12 Chamber(gas generator) components 2.12.14 TC20/SC14/WG2

2349 <for chamber> item of engine chamber intended for one of the propellant components or gas generation products to input into the wall area of the fire space for the creation of a liquid or gas protective layer

1844 *vendor*

ISO 14621-1:2019 3.1.11 TC20/SC14/WG5

2350 seller of parts, products, or commodities
Note 1 to entry: This term can be interchangeable with manufacturer (3.1.4), depending on the application

1845 *vent*

ISO 17546:2016 3.38 TC20/SC14/WG1

2351 release of excessive internal pressure from a cell or battery in a manner intended by design to preclude rupture or disassembly [6][8][9]

[6] ST/SG/AC. 10/11/Rev.5/Amend.1, “United Nations Transport of Dangerous Goods UN Manual of Tests and Criteria, Part III, sub-section 38.3 Fifth revised edition Amendment 1”
[8] NAVSEA S9310-AQ-SAF-10 SEOND REVISON. TECHNICAL MANUAL FOR NAVY LITHIUM BATTERY SAFETY PROGRAM RESPONSIBILITIES AND PROCEDURES”
[9] IEC 62133, Secondary cells and batteries containing alkaline or other non-acid electrolytes -
Safety requirements for portable sealed secondary cells, and for batteries made from them, for use
in portable applications

1846 *ventilation system*

ISO 17540:2016 2.49 Stand systems 2.49.8 TC20/SC14/WG2

2352 stand facility that provides controllable air exchange in stand rooms

1847 *verification*

	ISO 10795:2019	3.244	TC20/SC14/WG5

2353 confirmation, through the provision (3.181) of objective evidence, that specified requirements (3.201) have been fulfilled
Note 1 to entry: The objective evidence needed for a verification can be the result of an inspection (3.127) or of other forms of determination such as performing alternative calculations or reviewing documents (3.88).
Note 2 to entry: The activities carried out for verification are sometimes called a qualification process (3.185).
Note 3 to entry: The word “verified” is used to designate the corresponding status.
[SOURCE: ISO 9000:2015, 3.8.12]

	ISO 14621-1:2019	3.1.12	TC20/SC14/WG5

2354 confirmation, through the provision of objective evidence, that specified requirements have been fulfilled
[SOURCE: ISO 9000:2015, 3.8.12, modified — Notes 1, 2, and 3 to entry have been deleted.]

	ISO 14952-1:2003	2.34	TC20/SC14/WG6

2355 verify/verification
process or method to establish the truth, accuracy (2.1), or reality of the cleanliness level of a cleaned item
NOTE This definition is different from that in ISO 9000.
EXAMPLE A solvent flush might be used to verify the cleanliness level of a system.

	ISO 16290:2013	2.21	TC20/SC14/WG5

2356 confirmation through the provision of objective evidence that specified requirements (2.18) have been fulfilled
Note 1 to entry: The term “verified” is used to designate the corresponding status.
Note 2 to entry: Confirmation can be comprised of activities such as: performing alternative calculations, comparing a new design specification with a similar proven design specification, undertaking tests and demonstrations, and reviewing documents prior to issue.
Note 3 to entry: Verification may be determined by a combination of test, analysis, demonstration, and inspection.
Note 4 to entry: When an element is verified, it is confirmed that it meets the design specifications.
Note 5 to entry: Adapted from ISO 10795, definition 1.229

	ISO 16781:2013	2.15	TC20/SC14/WG1

2357 confirmation through the provision of objective evidence that specified requirements have been fulfilled
Note 1 to entry: The term "verified" is used to designate the corresponding status.
Note 2 to entry: Confirmation can comprise activities such as
- performing alternative calculations
- comparing a new design specification with a similar proven design specification
- undertaking tests and demonstrations,
- reviewing documents prior to issue.
Note 3 to entry: Verification may be determined by a combination of test, analysis, demonstration, and inspection.
[SOURCE: ISO 10795:2011]

	ISO 17566:2011	2.8	TC20/SC14/WG2

2358 confirmation, through the provision of objective evidence, that specified requirements of the spacecraft system have been fulfilled after exposure to simulated or in-service loads

ISO/TS 18667:2018	3.1.16	TC20/SC14/WG5

2359 confirmation through the provision of objective evidence that specified requirements have been fulfilled
Note 1 to entry: The term “verified” is used to designate the corresponding status.
Note 2 to entry: Confirmation can be comprised of activities such as performing alternative calculations,
comparing a new design specification with a similar proven design specification, undertaking tests and
demonstrations, reviewing documents prior to issue.
Note 3 to entry: Verification may be determined by a combination of test, analysis, demonstration, and inspection

1848 *verification matrix*

ISO 21351:2005	3.1.12	TC20/SC14/WG5

2360 matrix that defines the verification strategy for each product technical requirement in terms of methods, level and stages

1849 *verification test*

ISO 15859-1:2004	3.3	TC20/SC14/WG6

2361 analysis performed on the fluid in the container, or a sample thereof, which is representative of the supply, permitting the verification of fluid composition limits

ISO 15859-10:2004	3.1	TC20/SC14/WG6

2362 analysis performed on the fluid in the container, or a sample thereof, which is representative of the supply, permitting the verification of fluid composition limits

ISO 15859-11:2004	3.2	TC20/SC14/WG6

2363 analysis performed on the fluid in the container, or a sample thereof, which is representative of the supply, permitting the verification of fluid composition limits

ISO 15859-12:2004	3.1	TC20/SC14/WG6

2364 analysis performed on the fluid in the container, or a sample thereof, which is representative of the supply, permitting the verification of fluid composition limits

ISO 15859-13:2004	3.2	TC20/SC14/WG6

2365 analysis performed on the fluid in the container, or a sample thereof, which is representative of the supply, permitting the verification of fluid composition limits

ISO 15859-2:2004	3.2	TC20/SC14/WG6

2366 analysis performed on the fluid in the container, or a sample thereof, which is representative of the supply, permitting the verification of fluid composition limits

ISO 15859-3:2004	3.4	TC20/SC14/WG6

2367 analysis performed on the fluid in the container, or a sample thereof, which is representative of the supply, permitting the verification of fluid composition limits

ISO 15859-4:2004	3.2	TC20/SC14/WG6

2368 analysis performed on the fluid in the container, or a sample thereof, which is representative of the supply, permitting the verification of fluid composition limits

	ISO 15859-5:2004	3.2	TC20/SC14/WG6
2369	analysis performed on the fluid in the container, or a sample thereof, which is representative of the supply, permitting the verification of fluid composition limits		
	ISO 15859-6:2004	3.2	TC20/SC14/WG6
2370	analysis performed on the fluid in the container, or a sample thereof, which is representative of the supply, permitting the verification of fluid composition limits		
	ISO 15859-7:2004	3.3	TC20/SC14/WG6
2371	analysis performed on the fluid in the container, or a sample thereof, which is representative of the supply, permitting the verification of fluid composition limits		
	ISO 15859-8:2004	3.2	TC20/SC14/WG6
2372	analysis performed on the fluid in the container, or a sample thereof, which is representative of the supply, permitting the verification of fluid composition limits		
	ISO 15859-9:2004	3.1	TC20/SC14/WG6
2373	analysis performed on the fluid in the container, or a sample thereof, which is representative of the supply, permitting the verification of fluid composition limits		

1850 *verify*

	ISO 14952-1:2003	2.34	TC20/SC14/WG6
2374	verify/verification process or method to establish the truth, accuracy (2.1), or reality of the cleanliness level of a cleaned item NOTE This definition is different from that in ISO 9000. EXAMPLE A solvent flush might be used to verify the cleanliness level of a system.		

1851 *vertical test stand*

	ISO 17540:2016	2.48 Stand types 2.48.1	TC20/SC14/WG2
2375	engine test stand (2.47.1) with the engine mounted in a datum position so that its gas dynamic axis has vertical or close to vertical direction Note 1 to entry: The vertical stand engine thruster can be mounted with the nozzle (2.12.16) up or down.		

1852 *viable particle*

	ISO 15388:2012	3.1.51	TC20/SC14/WG6
2376	isolated microorganisms or accumulated microorganisms (clumps) on a particle, capable of producing demonstrable growth		

1853 *vibroacoustic*

	ISO 10786:2011	3.71	TC20/SC14/WG1
2377	environment induced by high-intensity acoustic noise associated with various segments of the flight profile NOTE It manifests itself throughout the structure in the form of transmitted acoustic excitation and as structure-borne random vibration.		

1854 *visibly clean*

VC	**ISO 14952-1:2003**	2.35	TC20/SC14/WG6

2378 absence of surface contamination when examined using a specified light source and angle of incident viewing distance and angle, and normal or magnified vision
NOTE 1 This level requires precision-cleaning (2.25) methods but a particle (2.20) count may be optional.
NOTE 2 Fluorescence indicates possible contamination by, for example, a hydrocarbon (2.14).
NOTE 3 If recleaning fails to remove fluorescent indications, an investigation should be made to determine if the item material is naturally fluorescent or if the cleaning method is adequate.

	ISO 15388:2012	3.1.52	TC20/SC14/WG6

2379 absence of surface contamination when examined using a specified light source and angle of incidence, viewing distance and angle, and normal or magnified vision
NOTE 1 This level requires precision-cleaning methods but a particle count may be optional.
NOTE 2 Fluorescence indicates possible contamination by, for example, a hydrocarbon.
NOTE 3 If recleaning fails to remove fluorescent indications, an investigation should be made to determine if the item material is naturally fluorescent or if the cleaning method is adequate.
[ISO 14952-1:2003, 2.35]

1855 *visibly clean plus ultraviolet*

VC+UV	**ISO 14952-1:2003**	2.36	TC20/SC14/WG6

2380 cleaning level that is visibly clean (VC) and also meets the requirements for inspection with the aid of ultraviolet light (black light) of wavelength 320 nm to 380 nm

1856 *visual damage threshold*

VDT	**ISO 10786:2011**	3.72	TC20/SC14/WG1

2381 impact energy level shown by test(s) to create an indication that is barely detectable by a trained inspector using an unaided visual inspection technique
[ISO 21347:2005]

	ISO 14623:2003	2.63	TC20/SC14/WG1

2382 impact energy level shown by a test or tests that creates an indication that is barely detectable by a trained inspector using an unaided visual inspection technique

VDT	**ISO 21347:2005**	3.39	TC20/SC14/WG1

2383 impact energy level shown by a test or tests that creates an indication barely detectable by a trained inspector using an unaided visual inspection technique

VDT	**ISO 21648:2008**	2.1.38	TC20/SC14/WG1

2384 impact energy level shown by test(s) which creates an indication that is detectable by a trained inspector using an unaided visual technique

1857 *vital telecommand*

	ISO 14950:2004	3.2.25.3	TC20/SC14/WG3

2385 Level C
telecommand that is not a critical telecommand but is essential to the success of the mission and, if sent at the wrong time, could cause momentary loss of the mission

1858 *volatile hydrocarbon*

	ISO 14952-1:2003	2.37	TC20/SC14/WG6

2386 hydrocarbon (2.14) capable of going from liquid or solid to a gaseous state at ambient temperature and pressure

1859 *voltage temperature coefficient*

β	**ISO 15387:2005**	3.39	TC20/SC14/WG1

2387 change of the open circuit voltage of a solar cell as a function of the change of cell temperature
NOTE β is expressed in volts per degree Celsius ($V\cdot{}^{\circ}C^{-1}$).

1860 *volume flow rate*

	ISO 17540:2016	2.7 General parameters and performance of engine 2.7.3	TC20/SC14/WG2

2388 volume of fluid passing a specified line or gate in unit time

1861 *volume impact factors*

	ISO 17851:2016	3.4 Terms related to penetration depth of affecting space factors 3.4.2	TC20/SC14/WG4

2389 space factors causing changes in bulk materials (in depths more than 0,1 mm to 1 mm)
EXAMPLE Particles of Earth's radiation belts, galactic cosmic rays, solar energetic particles, meteoroids and others.

1862 *volume properties*

	ISO 15856:2010	3.1.19	TC20/SC14/WG4

2390 volume properties
bulk properties
properties that are determined by characteristics averaged through the volume of a product

1863 *volume ratio*

	ISO 17540:2016	2.7 General parameters and performance of engine 2.7.6	TC20/SC14/WG2

2391 ratio of oxidizer volume flow rate (2.7.3) to the fuel volume rate

1864 *volume specific impulse*

	ISO 17540:2016	2.7 General parameters and performance of engine 2.7.17	TC20/SC14/WG2

2392 ratio of engine thrust to the propellant volume flow rate .

$I_{s,v} = (R/v)$

1865 *waiver*

	ISO 10795:2019	3.245	TC20/SC14/WG5

2393 formal authorization (3.27) to accept products (3.173) which during production, or after having been submitted to inspection (3.127) or tests (3.239), are found to depart from specified requirement (3.201)
Note 1 to entry: Deviation (3.86) is an a priori decision whereas waiver is an a posteriori decision with respect to the production phase.
Note 2 to entry: The term “concession” is synonymous and may be used for materials (3.148) as per Q-ST-70C.
[SOURCE: EN 16601-00-01:2015, 2.3.229]

1866 *wake*

	ISO 11221:2011	2.31	TC20/SC14/WG4

2394 trail of rarefied plasma left behind by a moving spacecraft

1867 *wall layer in chamber*

	ISO 17540:2016	2.14 Operating process in chamber (gas generator) 2.14.5	TC20/SC14/WG2

2395 <gas generator> part of the propellant flow in a chamber (2.2.1) (gas generator) that adjoins to the combustion chamber walls but different in terms of the chemical composition, thermophysical characteristics and speed

1868 *warning condition*

	ISO 14620-1:2018	3.1.20	TC20/SC14/WG5

2396 condition where potentially catastrophic or critical hazardous events are imminent and where pre-planned safing action is required within a limited time
[SOURCE: Adapted from EN 13701:2001]

1869 *water compartment*

	ISO 17540:2016	2.52 Stand compartmen ts 2.52.7	TC20/SC14/WG2

2397 stand building designed to accommodate the transforming and switching equipment information- measuring complex

1870 *water supply system*

	ISO 17540:2016	2.49 Stand systems 2.49.14	TC20/SC14/WG2

2398 stand system (2.47.5) designed for cold water (process and drinking) and hot water supply

1871 *water vapour regained*

WVR	**ISO 15388:2012**	3.1.53	TC20/SC14/WG6

2399 mass of water vapour regained by a test specimen, after determination of TML and CVCM, on exposure to a specified relative humidity atmosphere (usually 50 % at 23 °C or 65 % at 20 °C) for 24 h
NOTE Some types of materials continue to absorb water for longer than 24 h. Repeated mass measurements after various time periods (e.g. 24 h, 48 h and 72 h) will give a better understanding of the material's water absorbency

1872 *wet mass*

	ISO 17540:2016	2.7 General parameters and performance of engine 2.7.30	TC20/SC14/WG2

2400 mass of engine designed with propellants and other consumption articles filling its pipelines and aggregates

1873 *witness plate*

	ISO 11227:2012	3.1.17	TC20/SC14/WG7

2401 flat sheet of ductile material used in impact experiments to capture ejecta and characterize the resulting damage

1874 *witness sample*

	ISO 16691:2014	3.1.17	TC20/SC14/WG6

2402 sample pieces that represent the coated product
Note 1 to entry: They shall be made in the form of the flat plates using the same coating material with the product, and coated simultaneously. Used for destructive test and test that requires limited size of specimen.

1875 *Wolf number*

W	**ISO 15390:2004**	2.2	TC20/SC14/WG4

2403 W = 10g+f
where
g -is sunspot group number;
f- is the total sunspot number on the sun's visible disk

W	**ISO/TR 18147:2014**	2	TC20/SC14/WG4

2404 Wolf (sunspot) number
W = k(10g+f), where g is sunspot group number; f is the total sunspot number on the visible solar disc. k is the coefficient adjusting various observation conditions.

1876 *work breakdown structure*

WBS	**ISO 10795:2019**	3.246	TC20/SC14/WG5

2405 hierarchical representation of the activities necessary to complete a project (3.178)
Note 1 to entry: The work breakdown structure is the principal structure used in managing a project and provides a framework for managing cost, schedule and technical content. It divides the project into manageable work packages (3.247), organized according to the nature of the work by breaking down the total work to be performed into increasing levels of detail.
Note 2 to entry: The work breakdown structure is derived from the product tree (3.176), selected elements of which are extended to include support functions (3.110) (e.g. management (3.146), engineering, product assurance (3.174)) and associated services (e.g. test (3.239) facilities).

	ISO 16091:2018	3.1.27	TC20/SC14/WG5

2406 hierarchical representation of the activities necessary to complete a project
[SOURCE: EN 16601-00-01:2015, 2.3.230]

1877 *work hardening effect*

	ISO 10785:2011	3.29	TC20/SC14/WG1

2407 effect of strengthening material by plastic deformation
NOTE The representative material is 300 series corrosion-resistant steel.

1878 *work package*

WP	**ISO 10795:2019**	3.247	TC20/SC14/WG5

2408 group of related tasks that are defined at the lowest level within a work breakdown structure (3.246)
[SOURCE: EN 16601-00-01:2015, 2.3.231]

	ISO 16091:2018	3.1.28	TC20/SC14/WG5

2409 group of related tasks that are defined down to the lowest level within a work breakdown structure
Note 1 to entry: Grouping of tasks related to a same product and a same supplier.
[SOURCE: ISO 16601-00-01:2015]

1879 *work station*

	ISO 17540:2016	2.47 Test stands: General 2.47.7	TC20/SC14/WG2

2410 place for a single test operator in a stand fire module where the engine to be tested is mounted

1880 *Worst case fluxes*

Worst case	*W*	**ISO/TR 18147:2014**	2	TC20/SC14/WG4

2411 Worst case fluxes (fluences or peak fluxes)
Fluxes, sizes that exceed probability 0,001 or occurred above the 0,999 confidence level.

1881 *worst-case configuration*

	ISO 14624-1:2003	3.6	TC20/SC14/WG6

2412 combination of material thickness, test pressure, oxygen concentration and temperature that make the material most flammable

1882 *worst-case environment*

ISO 14624-2:2003	4.5	TC20/SC14/WG6

2413 combination of test pressure, oxygen concentration and temperature that make the material most flammable

1883 *worst-case use thickness*

ISO 14624-1:2003	3.7	TC20/SC14/WG6

2414 material thickness that, for a specific application, makes the material most flammable
EXAMPLE The smallest thickness for use without a substrate or the greatest thickness for use with a substrate.

1884 *X-rays*

ISO 15856:2010	3.1.22	TC20/SC14/WG4

2415 irradiances with a wavelength in the range from 0,001 nm and 10 nm

1885 *yield load*

YL

ISO 10786:2011	3.73	TC20/SC14/WG1

2416 maximum design load that the structure shall withstand without detrimental deformation, which is expressed as a limit load multiplied by a yield design safety factor
NOTE The corresponding stress and/or strain is called yield stress and/or strain.

ISO 14622:2000	2.5.6	TC20/SC14/WG1

2417 limit load multiplied by the yield safety factor Je (2.10.1)

ISO 14623:2003	2.64	TC20/SC14/WG1

2418 product of the limit load and the design yield factor of safety

1886 *yield pressure*

ISO 14622:2000	2.6.2	TC20/SC14/WG1

2419 limit pressure multiplied by the yield safety factor Je (2.10.1)

1887 *yield strength*

ISO 10786:2011	3.74	TC20/SC14/WG1

2420 maximum load or stress that a structure or material can withstand without incurring a specified permanent deformation or yield
NOTE The yield is usually determined by measuring the departure of the actual stress-strain diagram from an extension of the initial straight proportion. The specified value is often taken as an offset unit strain of 0,002.

1888 *yield strength safety factor*

J_E

ISO 14953:2000	2.2.1	TC20/SC14/WG1

2421 ratio of the yield load of the material to the limit load
NOTE This coefficient is applicable only to metal structures.

1889 *Young's modulus*

E	**ISO 14622:2000**	2.8.1	TC20/SC14/WG1

2422 constant ratio between the stress and the resulting strain
NOTE The average value of the Young's modulus determined at the design temperature shall be taken into consideration

1890 *zero-magnetic field*

ISO 21494:2019	3.8	TC20/SC14/WG2

2423 magnetic field within a certain volume reduced to very low levels when the geomagnetic field is compensated by a cancelling magnetic field provided by a typical main coil system such as a Helmholtz coil or Braunbeck coil system

1891 *zonal analysis*

ISO 14620-1:2018	3.1.21	TC20/SC14/WG5

2424 systematic inspection of the geographical locations of the components and interactions of a system, evaluation of potential subsystem-to-subsystem interactions with and without failure, and assessment of the severity of potential hazards inherent in the system installation