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Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

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English version

Space engineering - Structural design and verification of pressurized hardware

Ingénierie spatiale - Conception structurelle et vérification des éléments pressurisés

Raumfahrttechnik - Strukturdesign und -verifikation von druckbeaufschlagten Teilen

This European Standard was approved by CEN on 10 February 2014.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN and CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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Table of contents

Foreword	5
1 Scope.....	6
2 Normative references	7
3 Terms, definitions, and abbreviated terms.....	8
3.1 Terms from other standards.....	8
3.2 Terms specific to the present standard	8
3.3 Abbreviated terms.....	14
3.4 Symbols.....	15
4 General requirements.....	16
4.1 Overview	16
4.1.1 Content	16
4.1.2 Categories of pressurized hardware.....	16
4.2 General.....	17
4.2.1 Leak tightness.....	17
4.2.2 Classification of fracture critical parts	17
4.2.3 Operation and maintenance	18
4.2.4 Service life extension, reactivation and re-acceptance	20
4.3 Pressure vessels	21
4.3.1 Factors of safety	21
4.3.2 Metallic pressure vessels	22
4.3.3 COPV with metallic liner.....	25
4.3.4 COPV with homogeneous non metallic liner and CPV	29
4.4 Pressurized structures	33
4.4.1 Factors of safety	33
4.4.2 Metallic pressurized structures.....	34
4.4.3 COPS with metallic liner.....	36
4.4.4 COPS with homogeneous non metallic liner and CPS	39
4.5 Pressure components.....	43
4.5.1 Metallic pressure components.....	43

4.5.2	COPC with metallic liner.....	45
4.5.3	COPC with homogeneous non metallic liner	48
4.6	Special pressurized equipment.....	51
4.6.1	Metallic special pressurized equipment.....	51
4.6.2	COSPE with metallic liner	58
4.6.3	COSPE with homogeneous non metallic liner	61
5	Specific requirements	65
5.1	Overview	65
5.2	Structural engineering.....	65
5.3	Failure mode demonstration	66
5.3.1	General.....	66
5.3.2	Demonstration of LBB by analysis.....	67
5.3.3	Demonstration of LBB by test using coupons	68
5.3.4	Demonstration of LBB by test using full-scale article	68
5.3.5	Report of LBB demonstration	69
5.4	Qualification tests	70
5.4.1	General.....	70
5.4.2	Proof pressure test.....	70
5.4.3	Leak test.....	71
5.4.4	Vibration test.....	71
5.4.5	Pressure cycling test.....	71
5.4.6	Design burst pressure test	71
5.4.7	Burst test.....	71
5.5	Acceptance tests	72
5.5.1	General.....	72
5.5.2	Proof pressure test.....	72
5.5.3	Leak test.....	72
5.6	Composite over-wrap material characterization	73
5.7	Inspection	73
5.7.1	General.....	73
5.7.2	Inspection techniques for composite over-wraps and composites	74
	Bibliography.....	75
Figures		
	Figure 4-1: Breakdown of PH types covered by this Standard.....	16
	Figure 4-2: Flowchart describing PH classifications covered by this Standard.....	17

EN 16603-32-02:2014 (E)

Figure 4-3: Development approach of MPV	23
Figure 4-4: Development approach of COPV with metallic liner.....	28
Figure 4-5: Development approach of COPV with homogeneous non metallic liner and CPV	32
Figure 4-6: Development approach of MPS.....	35
Figure 4-7: Development approach of COPS with metallic liner.....	39
Figure 4-8: Development approach of COPS with homogeneous non metallic liner and CPS	42
Figure 4-9: Development approach of MPC.....	45
Figure 4-10: Development approach of sealed containers.....	54
Figure 4-11: Development approach of cryostats (or Dewars).....	55
Figure 4-12: Development approach of heat pipes	56
Figure 4-13: Development approach of hazardous fluid containers	57

Tables

Table 4-1: Factors of safety for PV (unmanned and manned missions).....	22
Table 4-2: Factors of safety for PS (unmanned mission)	33
Table 4-3: Factors of safety for PS (manned mission)	33
Table 4-4: Factors of safety for manned modules.....	33
Table 4-5: Factors of safety for MPC (unmanned and manned missions).....	43
Table 4-6: Factors of safety for COPC with metallic liner (unmanned and manned missions).....	46
Table 4-7: Factors of safety for COPC with homogeneous non metallic liner (unmanned and manned missions)	49
Table 4-8: Factors of safety for MSPE (unmanned and manned missions).....	52
Table 4-9: Factors of safety for COSPE with metallic liner (unmanned and manned missions)	59
Table 4-10: Factors of safety for COSPE with homogeneous non metallic liner (unmanned and manned missions)	61

Foreword

This document (EN 16603-32-02:2014) has been prepared by Technical Committee CEN/CLC/TC 5 "Space", the secretariat of which is held by DIN.

This standard (EN 16603-32-02:2014) originates from ECSS-E-ST-32-02C Rev. 1.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by February 2015, and conflicting national standards shall be withdrawn at the latest by February 2015.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document has been developed to cover specifically space systems and has therefore precedence over any EN covering the same scope but with a wider domain of applicability (e.g. : aerospace).

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1

Scope

This Standard defines the structural design verification of metallic and non-metallic pressurized hardware which includes pressure vessels, pressurized structures, pressure components (such as valves, pumps, lines, fittings, and hoses), and special pressurized equipment (e.g. batteries, heat pipes, cryostats, sealed containers, hazardous fluids container). External supports and structural interfaces of pressurized hardware are not covered by this standard. Solid propellant motor cases are not covered by this standard.

Objectives of the associated verification process are primarily to demonstrate the qualification of design and performance, as meeting all specified requirements, and to ensure that the flight hardware is free from workmanship defects and acceptable for flight.

This Standard applies to all space products and in particular to launch vehicles, transfer vehicles, re-entry vehicles, spacecraft, space station, landing probes and rovers, sounding rockets, payloads and instruments.

This standard may be tailored for the specific characteristics and constraints of a space project in conformance with ECSS-S-ST-00.

2

Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this ECSS Standard. For dated references, subsequent amendments to, or revision of any of these publications, do not apply. However, parties to agreements based on this ECSS Standard are encouraged to investigate the possibility of applying the more recent editions of the normative documents indicated below. For undated references, the latest edition of the publication referred to applies.

EN reference	Reference in text	Title
EN 16601-00-01	ECSS-S-ST-00-01	ECSS system – Glossary of terms
EN 16603-10-02	ECSS-E-ST-10-02	Space engineering – Verification
EN 16603-10-03	ECSS-E-ST-10-03	Space engineering – Testing
EN 16603-32	ECSS-E-ST-32	Space engineering – Structural general requirements
EN 16603-32-01	ECSS-E-ST-32-01	Space engineering – Fracture control
EN 16603-32-08	ECSS-E-ST-32-08	Space engineering – Materials
EN 16603-32-10	ECSS-E-ST-32-10	Space engineering – Reliability based mechanical factors of safety
EN 16602-20	ECSS-Q-ST-20	Space product assurance – Quality assurance
EN 16602-70	ECSS-Q-ST-70	Space product assurance – Materials, mechanical parts and processes

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