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Space engineering - Structural general requirements

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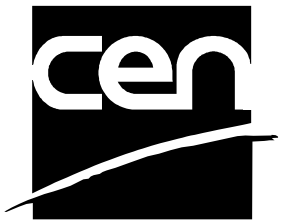

CEN-CENELEC Management Centre:
Avenue Marnix 17, B-1000 Brussels

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Foreword

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

This standard (EN 16603-32:2014) originates from ECSS-E-ST-32C 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of an identical text or by endorsement, at the latest by February 2015, and conflicting national standards shall be withdrawn at the latest by February 2015.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 supersedes EN 14607-2:2004.

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

ECSS-E-ST-32C (Space engineering – Structural) defines the mechanical engineering requirements for structural engineering.

This Standard specifies the requirements to be considered in all engineering aspects of structures: requirement definition and specification, design, development, verification, production, in-service and eventual disposal.

The Standard applies to all general structural subsystem aspects of space products including: launch vehicles, transfer vehicles, re-entry vehicles, spacecraft, landing probes and rovers, sounding rockets, payloads and instruments, and structural parts of all subsystems.

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 revisions 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 most 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 16603-32-01	ECSS-E-ST-32-01	Space engineering – Fracture control
EN 16603-32-02	ECSS-E-ST-32-02	Space engineering – Structural design and verification of pressurized hardware
EN 16603-32-10	ECSS-E-ST-32-10	Space engineering – Reliability based mechanical factors of safety
EN 16602-70-36	ECSS-Q-ST-70-36	Space product assurance – Material selection for controlling stress-corrosion cracking
EN 16602-70-37	ECSS-Q-ST-70-37	Space product assurance – Determination of the susceptibility of metals to stress-corrosion cracking