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Space engineering - Thermal control general requirements

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

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 01/15

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English version

Space engineering - Thermal control general requirements

Ingénierie spatiale - Contrôle thermique, exigences générales

Raumfahrttechnik - Thermalkontrolle, allgemeine Andorderungen

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Foreword

This document (EN 16603-31:2014) has been prepared by Technical Committee CEN/CLC/TC 5 “Space”, the secretariat of which is held by DIN.

This standard (EN 16603-31:2014) originates from ECSS-E-ST-31C.

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of an identical text or by endorsement, at the latest by March 2015, and conflicting national standards shall be withdrawn at the latest by March 2015.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 14607-1:2004.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

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-31 defines requirements for the discipline of thermal engineering.

This Standard defines the requirements for the definition, analysis, design, manufacture, verification and in-service operation of thermal control subsystems of spacecraft and other space products.

For this Standard, the complete temperature scale is divided into three ranges:

- Cryogenic temperature range
- Conventional temperature range
- High temperature range.

The requirements of this Standard are applicable to the complete temperature scale. However, where applicable, requirements are stated to be applicable only for the cryogenic or high temperature range. References to these specific requirements have been summarized in Annex G and Annex H.

This standard is applicable to all flight hardware of space projects, including spacecraft and launchers.

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

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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 16603-10-04	ECSS-E-ST-10-04	Space engineering – Space environment
EN 16601-40	ECSS-M-ST-40	Space project management – Configuration and information management
EN 16602-20	ECSS-Q-ST-20	Space product assurance – Quality assurance
EN 16602-40	ECSS-Q-ST-40	Space product assurance – Safety
EN 16602-70	ECSS-Q-ST-70	Space product assurance – Materials, mechanical parts and processes
EN 16602-70-01	ECSS-Q-ST-70-01	Space product assurance – Cleanliness and contamination control