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Space engineering - Liquid and electric propulsion for spacecraft

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 - Liquid and electric propulsion for spacecraft

Ingénierie spatiale - Propulsion liquide et électrique pour satellites

Raumfahrttechnik - Flüssige und elektrische Antriebe von Raumfahrzeugen

This European Standard was approved by CEN on 23 February 2014.

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Foreword

This document (EN 16603-35-01:2014) has been prepared by Technical Committee CEN/CLC/TC 5 “Space”, the secretariat of which is held by DIN.

This standard (EN 16603-35-01:2014) originates from ECSS-E-ST-35-01C.

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of an identical text or by endorsement, at the latest by March 2015, and conflicting national standards shall be withdrawn at the latest by March 2015.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 14607-5-1:2004.

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.

Introduction

The ECSS Propulsion standards structure is as follows.

ECSS-E-ST-35 Propulsion general requirements

- Standards, covering particular type of propulsion
  - ECSS-E-ST-35-01 Liquid and electric propulsion for spacecrafts
  - ECSS-E-ST-35-02 Solid propulsion for spacecrafts and launchers
  - ECSS-E-ST-35-03 Liquid propulsion for launchers
- Standard covering particular propulsion aspects
  - ECSS-E-ST-35-06 Cleanliness requirements for spacecraft propulsion hardware
  - ECSS-E-ST-35-10 Compatibility testing for liquid propulsion systems

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Scope

This Standard defines the regulatory aspects applicable to elements and processes for liquid, including cold gas, and electrical propulsion for spacecraft. It specifies the activities to be performed in the engineering of such propulsion systems, their applicability, and defines the requirements for the engineering aspects: functional, interfaces, environmental, design, quality factors, operational and verification.

General requirements applying to all type of Propulsion Systems Engineering are defined in ECSS-E-ST-35.

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 16601-01	ECSS-S-ST-00-01	ECSS system – Glossary of terms
EN 16603-10	ECSS-E-ST-10	Space engineering – System engineering general requirements
EN 16603-20	ECSS-E-ST-20	Space engineering – Electrical and electronic
EN 16603-20-06	ECSS-E-ST-20-06	Space engineering – Spacecraft changing
EN 16603-20-07	ECSS-E-ST-20-07	Space engineering – Electromagnetic compatibility
EN 16603-31	ECSS-E-ST-31	Space engineering – Thermal control general requirements
EN 16603-32	ECSS-E-ST-32	Space engineering – Structural general requirements
EN 16603-35	ECSS-E-ST-35	Space engineering – Propulsion general requirements
EN 16602-30	ECSS-Q-ST-30	Space product assurance – Dependability