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I.S. EN 16603-35-03:2014

Space engineering - Liquid propulsion for launchers

I.S. EN 16603-35-03:2014

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Foreword

This document (EN 16603-35-03:2014) has been prepared by Technical Committee CEN/CLC/TC 5 "Space", the secretariat of which is held by DIN.

This standard (EN 16603-35-03:2014) originates from ECSS-E-ST-35-03C.

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of an identical text or by endorsement, at the latest by March 2015, and conflicting national standards shall be withdrawn at the latest by March 2015.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 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 requirements in this Standard ECSS-E-ST-35-03 (and in the 3 other space propulsion standards ECSS-E-ST-35, ECSS-E-ST-35-01 and ECSS-E-ST-35-02) are organized with a typical structure as follows:

- functional;
- constraints;
- development;
- interfaces;
- design;
- GSE;
- materials;
- verification;
- production and manufacturing;
- in-service (operation and disposal);
- deliverables.

This standard forms parts of ECSS-E-ST-35 series which has the following structure;

- ECSS-E-ST-35 Propulsion general requirements
- 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
- ECSS-E-ST-35-06 Cleanliness requirements for spacecraft propulsion components, subsystems, and systems
- ECSS-E-ST-35-10 Compatibility testing for liquid propulsion components, subsystems, and systems

ECSS-E-ST-35 contains all the normative references, terms, definitions, abbreviated terms, symbols and DRD that are applicable for ECSS-E-ST-35, ECSS-E-ST-35-01, ECSS-E-ST-35-02 and ECSS-E-ST-35-03.

In the use of this standard, the term 'propulsion system' is intended to be read and interpreted only and specifically for 'liquid propulsion system'.

1 Scope

General requirements applying to all type of Propulsion Systems Engineering are defined in ECSS-E-ST-35. For Liquid propulsion for launchers activities within a space project the standards ECSS-E-ST-35 and ECSS-E-ST-35-03 are applied together.

This Standard defines the specific regulatory aspects that apply to the elements and processes of liquid propulsion for launch vehicles. It specifies the activities to be performed in the engineering of these propulsion systems and their applicability. It defines the requirements for the engineering aspects such as functional, physical, environmental, quality factors, operational and verification.

Other forms of propulsion (e.g. nuclear, nuclear-electric, solar-thermal and hybrid propulsion) are not presently covered in this issue of the Standard.

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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