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Space product assurance - Materials,
mechanical parts and processes

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

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FprEN 16602-70

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English version

Space product assurance - Materials, mechanical parts and processes

Assurance produits des projets spatiaux - Matériaux, composants mécaniques et procédés

Raumfahrtproduktsicherung - Werkstoffe, mechanische Teile und Prozesse

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If this draft becomes a European Standard, CEN and CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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Orbweaver

Preview

European Foreword

This document (FprEN 16602-70:2016) has been prepared by Technical Committee CEN/CLC/TC 5 "Space", the secretariat of which is held by DIN (Germany).

This document (FprEN 16602-70:2016) originates from ECSS-Q-ST-70C Rev.1.

This document is currently submitted to the Unique Acceptance Procedure.

This document will supersede EN 13291-3:2003.

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

Preview

Orbital

1 Scope

This Standard specifies the requirements and statements applicable to materials, mechanical parts and processes to satisfy the mission performance requirements.

This Standard also specifies the documentation requirements and the procedures relevant to obtaining approval for the use of materials, mechanical parts and processes in the fabrication of space systems and associated equipment.

This Standard covers the following:

- management, including organization, reviews, acceptance status and documentation control;
- selection criteria and rules;
- evaluation, validation and qualification, or verification testing;
- procurement and receiving inspection;
- utilization criteria and rules.

The relationship between activities and programme phases is defined in Annex E.

The provisions of this Standard apply to all actors involved at all levels in the production of space systems. These can include manned and unmanned spacecraft, launchers, satellites, payloads, experiments, electrical ground support equipment, mechanical ground support equipment, and their corresponding organizations.

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

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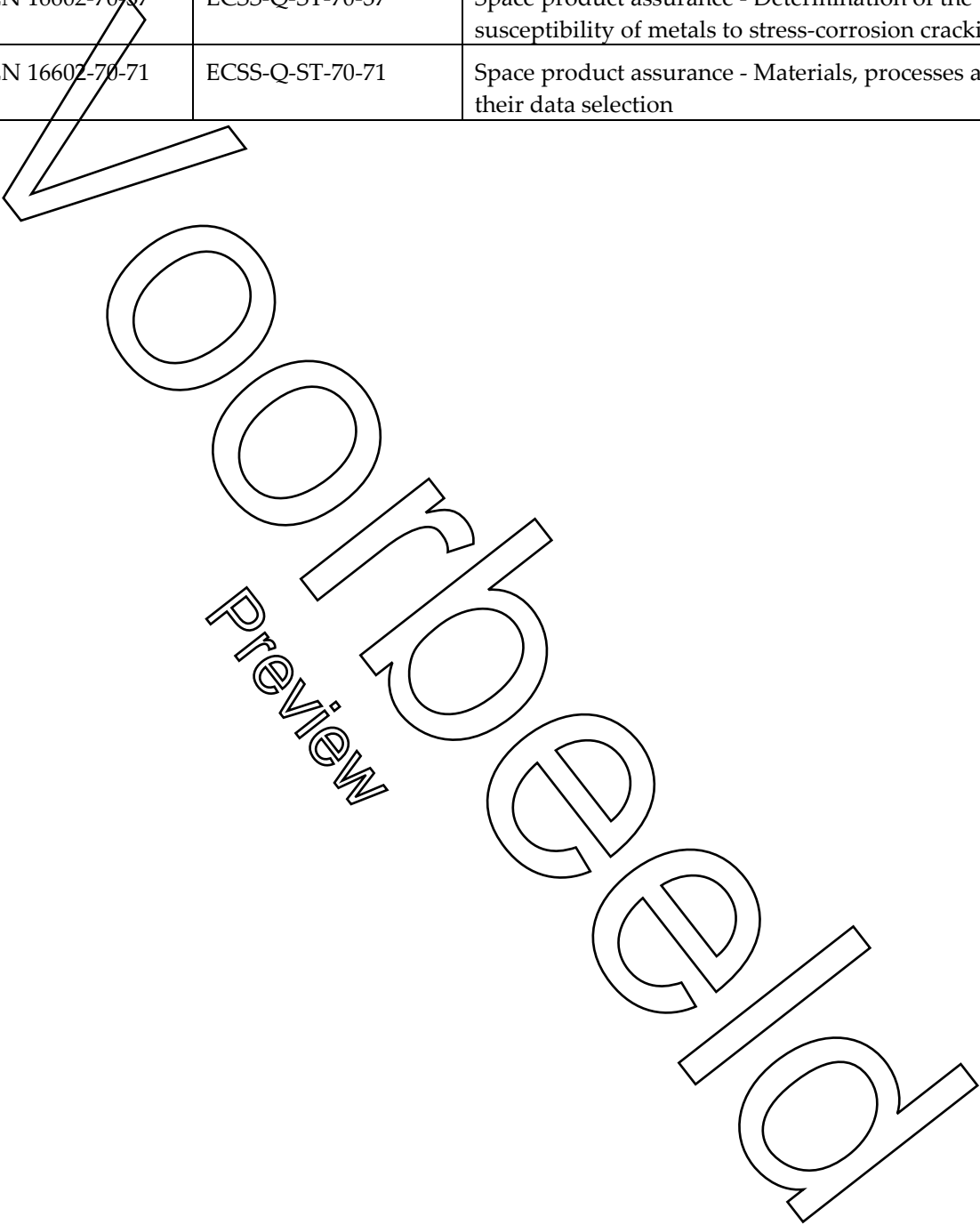
Normative references

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 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 16603-20-06	ECSS-E-ST-20-06	Space engineering - Spacecraft charging
EN 16601-80	ECSS-M-ST-80	Space product assurance - Risk management
EN 16602-10	ECSS-Q-ST-10	Space product assurance - Product assurance management
EN 16602-10-04	ECSS-Q-ST-10-04	Space product assurance - Critical-item control
EN 16602-10-09	ECSS-Q-ST-10-09	Space product assurance - Nonconformance control system
EN 16602-20	ECSS-Q-ST-20	Space product assurance - Quality assurance
EN 16602-40	ECSS-Q-ST-40	Space product assurance - Safety
EN 16602-70-01	ECSS-Q-ST-70-01	Space product assurance - Cleanliness and contamination control
EN 16602-70-02	ECSS-Q-ST-70-02	Space product assurance - Thermal vacuum outgassing test for the screening of space materials
EN 16602-70-04	ECSS-Q-ST-70-04	Space product assurance - Thermal testing for the evaluation of space materials, processes, mechanical parts and assemblies
EN 16602-70-06	ECSS-Q-ST-70-06	Space product assurance - Particle and UV radiation testing of space materials
EN 16602-70-09	ECSS-Q-ST-70-09	Space product assurance - Measurements of thermo-optical properties of thermal control materials
EN 16602-70-21	ECSS-Q-ST-70-21	Space product assurance - Flammability testing for the screening of space materials
EN 16602-70-22	ECSS-Q-ST-70-22	Space product assurance - Control of limited shelf-life materials

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EN 16602-70-29	ECSS-Q-ST-70-29	Space product assurance - Determination of offgassing products from materials and assembled articles to be used in a manned space vehicle crew compartment
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
EN 16602-70-71	ECSS-Q-ST-70-71	Space product assurance - Materials, processes and their data selection



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