



SLOVENSKI STANDARD
kSIST FprEN 16602-70-56:2014
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Zagotavljanje varnih proizvodov v vesoljski tehniki - Zmanjšanje biološke obremenitve v parni fazi za letalsko strojno opremo

Space product assurance - Vapour Phase Bioburden Reduction for Flight Hardware

Raumfahrtproduktsicherung - Reduktion der Gesamtkeimzahl bei Dampfphase für Flughardware

Assurance produit des projets spatiaux - Réduction en phase gazeuse de la charge microbienne des matériels de vol

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Assurance produit des projets spatiaux - Réduction en
phase gazeuse de la charge microbienne des matériels de
vol

Raumfahrtproduktsicherung - Reduktion der
Gesamtkeimzahl bei Dampfphase für Flughardware

This draft European Standard is submitted to CEN members for unique acceptance procedure. It has been drawn up by the Technical Committee CEN/CLC/TC 5.

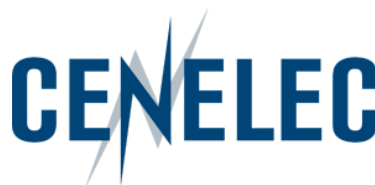
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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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Foreword

This document (FprEN 16602-70-56:2014) has been prepared by Technical Committee CEN/CLC/TC 5 “Space”, the secretariat of which is held by DIN (Germany).

This document (FprEN 16602-70-56:2014) originates from ECSS-Q-ST-70-56C.

This document is currently submitted to the Unique Acceptance Procedure.

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).

Introduction

The UN Outer Space Treaty of 1967 sets up the general principles applicable to the exploration and use of outer space. Article IX of the Outer Space Treaty constitutes the primary statement of international law:

“States parties shall pursue studies of outer space, including the Moon and other celestial bodies, and conduct exploration of them so as to avoid their harmful contamination and also adverse changes in the environment of the Earth resulting from the introduction of extraterrestrial matter and, when necessary, adopt appropriate measures for this purpose.”

Harmful contamination in that sense is defined as biological contamination, including organic-constituents, to protect the environment in order to allow future exobiology research. The Committee On Space Research (COSPAR) has established some planetary protection guidelines, based on the Outer Space Treaty. These guidelines impose requirements on spaceflight missions according to target body/mission type combinations.

The objective of this Standard is to ensure that proper procedures for reducing the microbiological contamination on flight hardware are in place to meet the planetary protection constraints.

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Scope

This standard specifies procedures for the reduction of microbiological contamination of flight hardware using hydrogen peroxide vapour.

The procedures specified in this standard cover:

- Reduction of microbiological contamination on exposed surfaces.
- Reduction of microbiological contamination in controlled ambient and vacuum environments.

This standard also specifies requirements for the conditioning of the flight hardware, bioburden reduction cycle development, and equipment to be used for applying a bioburden reduction procedure.

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

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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 16601-40	ECSS-M-ST-40	Space project management - Configuration and information management
EN 16602-10-09	ECSS-Q-ST-10-09	Space product assurance - Nonconformance control system
EN 16602-70-53	ECSS-Q-ST-70-53	Space product assurance - Materials and hardware compatibility tests for sterilization processes
EN 16602-70-55	ECSS-Q-ST-70-55	Space product assurance - Microbial examination of flight hardware and cleanrooms
EN 16602-70-58	ECSS-Q-ST-70-58	Space product assurance - Bioburden control of cleanrooms
	IEST-STD-CC1246D	Institute of environmental science and technology - product cleanliness levels and contamination control program