SLOVENSKI STANDARD
kSIST FprEN 16602-70-36:2014

01-februar-2014

Zagotavljanje varnih proizvodov v vesoljski tehniki - Merila za izbiranje materialov za izogibanje stresnim korozijskim razpokam

Space product assurance - Material selection for controlling stress-corrosion cracking

Raumfahrtproduktsicherung - Kriterien für die Werkstoffwahl zur Vermeidung von Spannungsrisskorrosion

Assurance produit des projets spatiaux - Sélection des matériaux en vue d'éviter leur fissuration par corrosion sous contrainte

Ta slovenski standard je istoveten z: FprEN 16602-70-36

ICS:

49.025.01	Materiali za letalsko in vesoljsko gradnjo na splošno	Materials for aerospace construction in general
49.140	Vesoljski sistemi in operacije	Space systems and operations
77.060	Korozija kovin	Corrosion of metals

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

FINAL DRAFT
FprEN 16602-70-36

October 2013

ICS 49.025.01; 49.140

Will supersede EN 14101:2001

English version

Space product assurance - Material selection for controlling stress-corrosion cracking

Assurance produit des projets spatiaux - Sélection des matériaux en vue d'éviter leur fissuration par corrosion sous contrainte

Raumfahrtproduktsicherung - Kriterien für die Werkstoffwahl zur Vermeidung von Spannungsrisskorrosion

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.

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.

This draft European Standard was established by CEN and CENELEC in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN and CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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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 16602-70-36:2013) has been prepared by Technical Committee CEN/CLC/TC 5 "Space", the secretariat of which is held by DIN (Germany).

This document (FprEN 16602-70-36:2013) originates from ECSS-Q-ST-70-36C.

This document is currently submitted to the Unique Acceptance Procedure.

This document will supersede EN 14101:2001.

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

1 Scope

This Standard covers the following processes of the general materials, mechanicals parts and processes (MMPP) flow of ECSS-Q-ST-70:

- The selection of metal alloys for which preference is given to approved data sources (Table 5-1 to Table 5-3)
- The criticality analysis to determine if a stress corrosion cracking (SCC) evaluation is necessary

This Standard sets forth the criteria to be used in the selection of materials for spacecraft and associated equipment and facilities so that failure resulting from stress-corrosion is prevented.

It is intended to provide general criteria to be used in stress-corrosion cracking control, which begins during design thanks to a methodological material selection.

This document does not intend to include all factors and criteria necessary for the total control of stress-corrosion cracking in all alloys.

The criteria established in this Standard are only applicable to designs for service involving exposure conditions similar to testing conditions

As regards weldments, this Standard is applicable to aluminium alloys, selected stainless steels in the 300 series and alloys listed in Table 5-1.

This Standard is not applicable to listed materials whose behaviour differs at elevated temperature and in specific chemical.

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