

SLOVENSKI STANDARD
kSIST FprEN 16602-70-36:2014
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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

Raumfahrtproduksicherung - 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

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49.140	Vesoljski sistemi in operacije	Space systems and operations
77.060	Korozija kovin	Corrosion of metals

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**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

Raumfahrtproduksicherung - Kriterien für die Werkstoffwahl zur Vermeidung von Spannungsrißkorrosion

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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 therefore have precedence over any EN covering the same scope but with a wider domain of applicability (e.g. : aerospace).

FprEN 16602-70-36:2013 (E)**1****Scope**

This Standard covers the following processes of the general materials, mechanical 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 constraints of a space project in conformance with ECSS-S-ST-00.