ICS 49.090, 49.140 SLOVENSKÁ TECHNICKÁ NORMA Apríl 2015

STN	**Zabezpečovanie výrobkov kozmického programu. Stanovenie citlivosti na koróziu "červená hrdza" postriebrených medených drôtov a káblov.**	**STN EN 16602-70-20** 31 0542

Space product assurance - Determination of the susceptibility of silver-plated copper wire and cable to red-plague corrosion

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 03/15

Obsahuje: EN 16602-70-20:2014

120352

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 16602-70-20

October 2014

ICS 49.090; 49.140

English version

Space product assurance - Determination of the susceptibility of silver-plated copper wire and cable to "red-plague" corrosion

Assurance produit des projets spatiaux - Détermination de la susceptibilité à la rouille rouge des fils et câbles en cuivre argenté

Raumfahrtproduktsicherung - Bestimmung der Anfälligkeit von silberbeschichtetem Kupferdraht und -kabeln für "red-plague"-Korrosion

This European Standard was approved by CEN on 11 April 2014.

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. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN and CENELEC member.

This European Standard exists 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.

CEN and CENELEC members are the national standards bodies and national electrotechnical committees of 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 United Kingdom.

CEN-CENELEC Management Centre:
Avenue Marnix 17, B-1000 Brussels

Ref. No. EN 16602-70-20:2014 E

Table of contents

Figures

Tables

Foreword

This document (EN 16602-70-20:2014) has been prepared by Technical Committee CEN/CLC/TC 5 “Space”, the secretariat of which is held by DIN.

This standard (EN 16602-70-20:2014) originates from ECSS-Q-ST-70-20C.

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 April 2015, and conflicting national standards shall be withdrawn at the latest by April 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.

1
Scope

This Standard gives details of an accelerated screening test method and acceptance criteria to determine the suitability of silver-plated wire and cable materials for use on spacecraft and associated equipment. The test method, which also determines the suitability of the associated fabrication processes, is based on the work of Anthony and Brown (1965). They established that "red-plague" originates at breaks in the silver-plating of copper wire strands in the presence of moisture and oxygen. The environmental test system artificially promotes "red-plague" corrosion under controlled laboratory conditions as a result of galvanic corrosion of the copper conductor core.

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

2
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 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 16602-70	ECSS-Q-ST-70	Space product assurance – Materials, mechanical parts and processes