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NSAI Standards

Irish Standard
I.S. EN 16602-70-20:2014

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

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NSAI	T +353 1 807 3800	Sales:
1 Swift Square,	F +353 1 807 3838	T +353 1 857 6730
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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 16602-70-20

October 2014

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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.

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Table of contents

Foreword **4**

1 Scope **5**

2 Normative references **6**

3 Terms, definitions and abbreviated terms **7**

3.1 Terms defined in other standards 7

3.2 Terms specific to the present standard 7

3.3 Abbreviated terms 7

4 Principles **8**

5 Requirements **9**

5.1 Preparatory conditions 9

5.1.1 Handling and storage 9

5.1.2 Identification 9

5.1.3 Test equipment 9

5.2 Test procedure 10

5.2.1 Preparation of test samples 10

5.2.2 Test sequence 11

5.3 Acceptance criteria 13

5.3.1 Inspection of sample 13

5.3.2 Acceptance and rejection criteria 13

5.4 Quality assurance 14

5.4.1 Data 14

5.4.2 Calibration and traceability 14

Annex A (normative) **Red-plague evaluation report - DRD** **15**

A.1 DRD identification 15

A.1.1 Requirement identification and source document 15

A.1.2 Purpose and objective 15

A.2 Expected response 15

A.2.1 Scope and content 15

A.2.2 Special remarks 15

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Annex B (informative) **Example of red-plague evaluation report template 16**

Annex C (informative) **Codes for extent of corrosion 18**

Bibliography.....25

Figures

Figure 5-1: Sketch of prepared test cable 11
Figure 5-2: Example of test equipment 12
Figure B-1 : Example of red-plague test report sheet 17
Figure C-1 : Extent of Corrosion (per 20 cm length/test sample): Code 0 19
Figure C-2 : Extent of Corrosion (per 20 cm length/test sample): Code 1 20
Figure C-3 : Extent of Corrosion (per 20 cm length/test sample): Code 2 21
Figure C-4 : Extent of Corrosion (per 20 cm length/test sample): Code 3 22
Figure C-5 : Extent of Corrosion (per 20 cm length/test sample): Code 4 23
Figure C-6 : Extent of Corrosion (per 20 cm length/test sample): Code 5 24

Tables

Table 5-1: Corrosion classification.....14

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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.

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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.

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