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Space product assurance - Relifing procedure - EEE components

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. 02/21

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Supersedes EN 16602-60-14:2014

English version

Space product assurance - Relifing procedure - EEE components

Assurance produit des projets spatiaux - Procédure de remise en état - Composants EEE

Raumfahrtproduktsicherung - Wiederbelebungsprozeduren für EEE-Komponenten

This European Standard was approved by CEN on 19 July 2020.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

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European Foreword

This document (EN 16602-60-14:2020) has been prepared by Technical Committee CEN-CENELEC/TC 5 “Space”, the secretariat of which is held by DIN.

This document (EN 16602-60-14:2020) originates from ECSS-Q-ST-60-14C Rev.1 Corrigendum 1.

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of an identical text or by endorsement, at the latest by March 2021, and conflicting national standards shall be withdrawn at the latest by March 2021.

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 supersedes EN 16602-60-14:2014.

The main changes with respect to EN 16602-60-14:2014 are:

- Creation of two relifing flows: one covering Class 1 and Class 2 components and the other covering Class 3 components
- Harmonization with EN 16602-60:2015 (based on ECSS-Q-ST-60C Rev.2)
- Introduction of the applicability of the relifing requirements to commercial components
- Change of timing requirements for relifing (from 7+3 to 7+4+4 years) increasing the maximum elapsed time between date code and time of mounting from 10 to 15 years
- Transformation of normative Annex A "Relifing report - DRD" by into informative Annex C "Guidelines for a Relifing report"
- Deletion of informative Annex B "ESD".

This document has been prepared under a standardization request 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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This standard specifies the requirements, also known as “relifing requirements”, for the planned, intentional storage, control, and removal from storage of electronic, electrical and electromechanical parts which are intended to be used for space applications.

This standard covers the relifing of all components as defined by ECSS-Q-ST-60 and ECSS-Q-ST-60-13.

The relifing process is a lot quality control activity. The inspections and tests defined do not constitute an up-screening or up-grading of components to a higher level of quality than procured to.

In line with ECSS-Q-ST-60, this standard differentiates between classes of components through different sets of standardization requirements.

The classes provide levels of trade-off between assurance and risk. The highest assurance and lowest risk is provided by Class 1 and the lowest assurance and highest risk by Class 3. Procurement costs are typically highest for Class 1 and lowest for Class 3. Mitigation and other engineering measures can decrease the total cost of ownership differences between the three classes. The project objectives, definition and constraints determine which class or classes of components are appropriate to be utilised within the system and subsystems.

- Class 1 components are described in Clause 4, 5 and 6
- Class 2 components are described in Clause 4, 5 and 6
- Class 3 components are described in Clause 4, 5 and 7

The requirements of this document apply to all parties involved at all levels in the integration of EEE components into space segment hardware and launchers.

This standard is applicable to all EEE parts covered by ECSS-Q-ST-60 and used in space programmes.

This standard is not applicable to dice.

This standard may be tailored for the specific characteristic and constrains 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 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 16602-10-09	ECSS-Q-ST-10-09	Space product assurance – Nonconformance control system
EN 16602-60	ECSS-Q-ST-60	Space product assurance – Electrical, electronic and electromechanical (EEE) components
EN 16602-60-13	ECSS-Q-ST-60-13	Space product assurance – Requirements for the use of COTS components
EN 16602-70-01	ECSS-Q-ST-70-01	Space product assurance – Cleanliness and contamination control
	ESCC 24900	Minimum Requirements for Controlling Environmental Contamination of Components
	IPC/JEDEC J-STD-033D April 2018	Handling, Packing, Shipping and Use of Moisture, Reflow, and Process Sensitive Devices
	ESCC 20600	Preservation, Packaging and dispatch of ESCC Electronic Components
	ANSI ASQ Z1.4-2003 Revision 2008	Sampling procedures and tables for inspection by attributes