SLOVENSKI STANDARD
SIST EN 16602-10-09:2014

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Nadomešča:
SIST EN 14097:2004

Zagotavljanje varnih proizvodov v vesoljski tehniki - Sistem kontrole neskladnosti

Space product assurance - Nonconformance control system

Raumfahrtproduktsicherung - Nichtkonformitäts-/Abweichungs-Kontrollsystem

Assurance produit des projets spatiaux - Système de contrôle des non-conformités

Ta slovenski standard je istoveten z: **EN 16602-10-09:2014**

ICS:

03.120.99	Drugi standardi v zvezi s kakovostjo	Other standards related to quality
49.140	Vesoljski sistemi in operacije	Space systems and operations

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EUROPEAN STANDARD

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English version

Space product assurance - Nonconformance control system

Assurance produit des projets spatiaux - Système de contrôle des non-conformités

Raumfahrtproduktsicherung - Nichtkonformitäts-/Abweichungs-Kontrollsystem

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Foreword

This document (EN 16602-10-09:2014) has been prepared by Technical Committee CEN/CLC/TC 5 “Space”, the secretariat of which is held by DIN.

This standard (EN 16602-10-09:2014) originates from ECSS-Q-ST-10-09C.

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of an identical text or by endorsement, at the latest by March 2015, and conflicting national standards shall be withdrawn at the latest by March 2015.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 supersedes EN 14097:2001.

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).

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1
Scope

This Standard defines the requirements for the control of nonconformances.

This Standard applies to all deliverable products and supplies, at all levels, which fail to conform to project requirements.

This Standard is applicable throughout the whole project lifecycle as defined in ECSS-M-ST-10.

This standard may be tailored for the specific characteristics 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 16602-20	ECSS-Q-ST-20	Space product assurance – Quality assurance
	ESCC 22800	EEE Nonconformance control system

3
Terms, definitions and abbreviated terms

3.1 Terms from other standards

For the purpose of this Standard, the terms and definitions from ECSS-ST-00-01 and ECSS-Q-ST-20 apply, in particular for the following terms:

alert

corrective action

critical item

customer

deviation

EEE component

inspection

item

nonconformance

preventive action

repair

requirement

rework

supplier

technical expert

verification

waiver

3.2 Terms specific to the present standard

3.2.1 major nonconformances

nonconformances which can have an impact on the customer's requirements in the following areas and cases:

- safety of people or equipment,

- operational, functional or any technical requirements imposed by the business agreement,
- reliability, maintainability, availability,
- lifetime,
- functional or dimensional interchangeability,
- interfaces with hardware or software regulated by different business agreements,
- changes to or deviations from approved qualification or acceptance test procedures,
- project specific items which are proposed to be scrapped.

3.2.2 minor nonconformances

nonconformances which by definition cannot be classified as major

NOTE For example, the following EEE discrepancies after delivery from the manufacturer can be classified as minor:

- random failures, where no risk for a lot-related reliability or quality problem exists;
- if the form, fit or function are not affected;
- minor inconsistencies in the accompanying documentation.

3.3 Abbreviated terms

For the purpose of this Standard, the abbreviated terms from ECSS-S-ST-00-01 and the following apply:

Abbreviation	Meaning
CIDL	configuration item data list
CIL	critical-item list
COTS	commercial off-the-shelf
DJF	design justification file
ECSS	European Cooperation for Space Standardization
EEE	electrical, electronic, electromechanical
FMECA	failure mode effect and criticality analysis
NCR	nonconformance report
NRB	nonconformance review board NOTE: Formerly known as MRB (material review board).
PA	product assurance
QA	quality assurance

RAMS	reliability, availability, maintainability, safety
RFD	request for deviation
RFW	request for waiver
SCC	space component coordination

4 Nonconformance control system principles

4.1 Process and objectives

The Figure 4-1 describes the approach to the identification and processing of nonconforming items, which can be performed at each customer/supplier level

This includes:

- corrective actions against root causes, to avoid recurrence for other products;
- prompt and effective communication between suppliers and customers;
- the prevention of nonconformance occurrence, from the analysis of nonconformance records and derived lessons learned.

4.2 Detection and immediate actions

When a nonconformance is detected, the project PA representative analyses it to identify its extent and cause. In addition he takes immediate actions to prevent unauthorized use of the nonconforming item. The nonconformance is documented on the NCR form and submitted to the internal NRB.

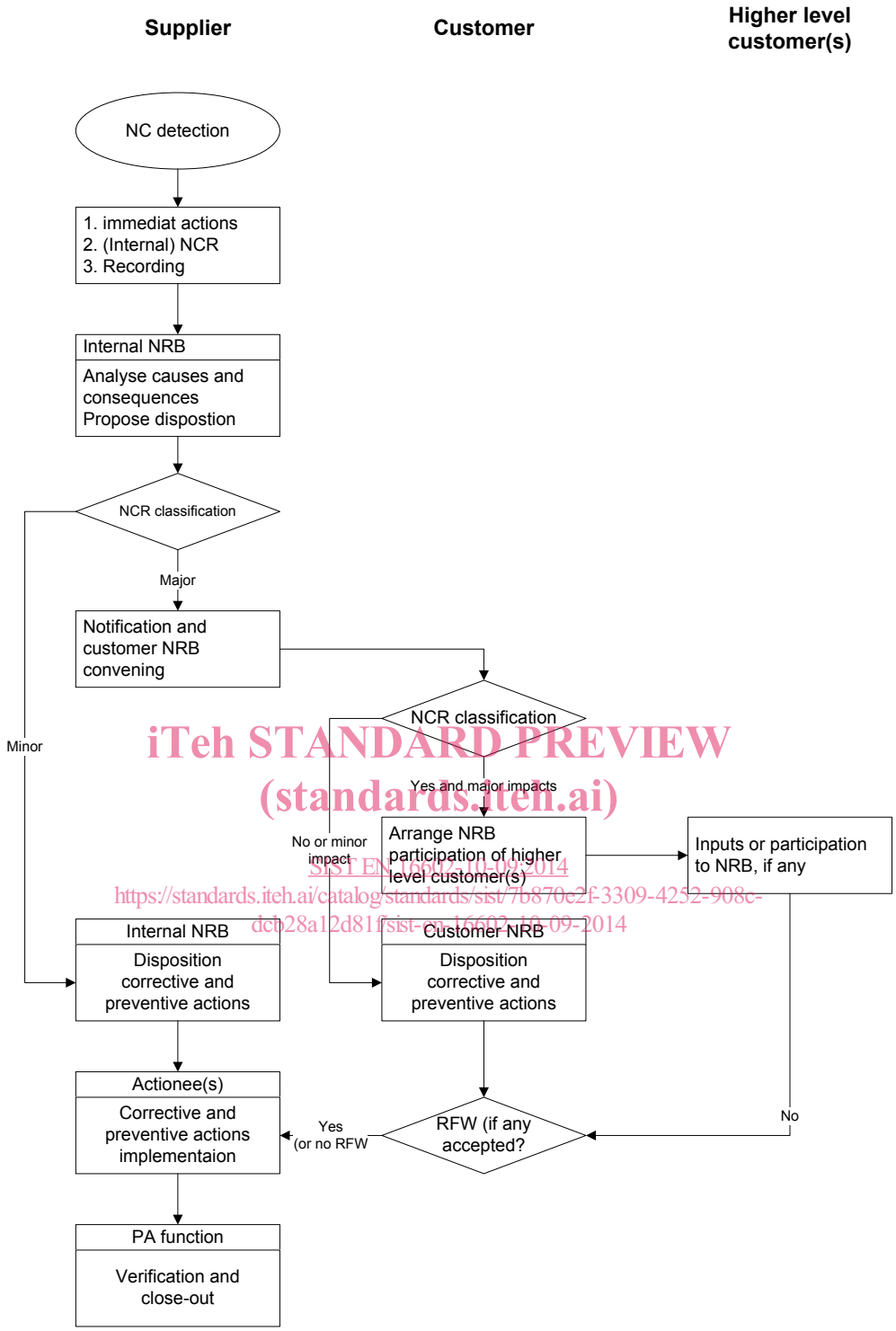

Figure 4-1: Nonconformance processing flow chart

4.3 Nonconformance review board (NRB)

4.3.1 Internal NRB

The internal NRB investigates the causes and consequences of the nonconformance and classifies the nonconformance either as minor or major.