SLOVENSKI STANDARD
oSIST prEN 9131:2018

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Aeronavtika - Sistemi vodenja kakovosti - Definicija podatkov o neskladnosti in dokumentacija

Aerospace series - Quality Management Systems - Nonconformance Data Definition and Documentation

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Ta slovenski standard je istoveten z: **prEN 9131**

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03.120.10	Vodenje in zagotavljanje kakovosti	Quality management and quality assurance
49.020	Letala in vesoljska vozila na splošno	Aircraft and space vehicles in general

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ICS 03.120.10; 03.100.70; 49.020

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English Version

Aerospace series - Quality Management Systems - Nonconformance Data Definition and Documentation

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee ASD-STAN.

If this draft becomes a European Standard, CEN 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.

This draft European Standard was established by CEN in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (prEN 9131:2018) has been prepared by the Aerospace and Defence Industries Association of Europe - Standardization (ASD-STAN).

After enquiries and votes carried out in accordance with the rules of this Association, this Standard has received the approval of the National Associations and the Official Services of the member countries of ASD, prior to its presentation to CEN.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 9131:2016.

0 Introduction

0.1 Rationale

This document has been significantly revised further defining process requirements and data expectations; restructuring the nonconformity documentation data and providing further definition of data descriptions; and providing process defect, cause, and corrective action codes.

This document was created to provide for the uniform submittal of nonconformity information for notification and/or approval when contractually invoked at any level or as guidance within the aviation, space, and defence industry. This document can be invoked as a stand-alone requirement or used in conjunction with the EN 9100 series standards (i.e. EN 9100, EN 9110, EN 9120).

0.2 Foreword

To ensure customer satisfaction, aviation, space, and defence industry organizations will produce, and continually improve, safe, reliable products that meet or exceed customer and regulatory authority requirements. The globalization of the industry, and the resulting diversity of regional/national requirements and expectations, has complicated this objective. End product organizations face the challenge of assuring the quality of, and integrating, product purchased from suppliers throughout the world and at all levels within the supply chain. Industry suppliers and processors face the challenge of delivering product to multiple customers having varying quality expectations and requirements.

The aviation, space, and defence industry established the International Aerospace Quality Group (IAQG) for the purpose of achieving significant improvements in quality and safety, and reductions in cost, throughout the value stream. This organization includes representation from companies in the Americas, Asia/Pacific, and Europe.

This document standardizes requirements for nonconformity data definition and documentation for the industry. The establishment of common requirements, for use at all levels of the supply-chain by organizations, should result in improved quality and safety, and decreased costs, due to the elimination or reduction of organization-unique requirements and the resultant variation inherent in these multiple expectations.

1 Scope

1.1 Application:

This document defines the common nonconformity data definition and documentation that shall be exchanged between an internal/external supplier or sub-tier supplier, and the customer when informing about a nonconformity requiring formal decision. The requirements are applicable, partly or totally, when reporting a product nonconformity to the owner or operator, as user of the end item (e.g. engine, aircraft, spacecraft, helicopter), if specified by contract.

Reporting of nonconformity data, either electronically or conventionally on paper, is subject to the terms and conditions of the contract. This also includes, where applicable, data access under export control regulations.

1.2 Purpose:

The process of exchanging, coordinating, and approving nonconformity data via waiver/concession or product quality escape varies with the multiple relationships and agreements among all parties concerned. The information provided by this document forms architecture for submitting and managing data that allows for concise and accurate communication using various methods. The main objective of this document is to provide the definition of a data set that can be integrated into any form of communication (e.g. electronic data interchange, submission of conventional paper forms).

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN ISO 9000:2015, *Quality management systems - Fundamentals and vocabulary (ISO 9000:2015)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN ISO 9000:2015 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at http://www.electropedia.org/

- ISO Online browsing platform: available at http://www.iso.org/obp

3.1
customer
recipient of a product provided by an internal/external supplier or sub-tier supplier

3.2
mandatory data
common and transferable data systematically filled in and provided

Note 1 to entry: The data field shall be printed out on the paper form.

3.3
optional data
all data fields that are not defined as mandatory by this document

Note 1 to entry: These fields may be requested by a customer or needed by the originator for their own purposes.

3.4
product
product of which examples include a vehicle, engine, equipment, component, deliverable software, or parts and materials thereof

Note 1 to entry: The definition of EN ISO 9000:2015, 3.7.6 applies.

3.5
product quality escape
product released by an internal/external supplier or sub-tier supplier, that is subsequently determined to have one or more nonconformities to contract and/or product specification requirements, that have not been positively dispositioned prior to delivery

3.6
waiver/concession
written authorization from the customer to the internal/external supplier to use or release a product which does not conform to the specified requirements

Note 1 to entry: Waiver/concession and product quality escape differ with respect to the point in time when a nonconformity is detected during the product life cycle. Waiver/concession is evident before delivery to the customer, while a product quality escape is identified after delivery to the customer.

4   Requirements

4.1   Data related to the description of a nonconformity (i.e. content, format, size) shall be in accordance with the complete set defined in Annex A and the contractual requirements.

a)   Mandatory data fields, identified in bold text and marked with an asterisk (*) shall be systematically recorded and reported to the customer.

b)   Optional data fields shall be recorded, when required, provided that it is not in contradiction with contractual requirements.

   For any data field, whether mandatory or optional data, recorded and reported to the customer that is not applicable shall have N/A entered in the field, prior to final approval/signature.

   Customers may require different optional data fields be recorded and reported. It is therefore recommended that the information technology system be capable of defining optional data fields and/or inactivating data fields based on each customer's recording/reporting requirements. This includes the capability of the information technology system to process with data types and data sizes specified in this document.

4.2   The entities responsible for entering and approving/acknowledging nonconformity data (in particular disposition, category/classification of the nonconformity, and associated limitations) shall respond in accordance with the terms and conditions of the contractual or regulatory requirements.

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4.3   Attached files should be in a protected format (e.g. pdf, tif, jpg), whenever possible. Where this is not practical, appropriate precautions shall be taken to prevent inadvertent changes to the attachments.

4.4   Where file sizes are constrained, file size optimization tool should be used. If a file compression is not capable of meeting file size constraints, the data exchange shall be agreed upon between both parties [e.g. via compact disk, USB flash drive, e-mail correspondence, direct access to data system].

4.5   When the description of a nonconformity is not required in an electronic format and/or is required as a printout, it shall be in a format similar to the example depicted in Annex B; however, the size and order of the fields may be changed to suit the individual application provided that:

a)   the contents of the boxes specified in this document are maintained; alternatively a cross reference can be used.

b)   the form is identified as a nonconformity record.

c)   complies with contractual/regulatory requirements.

4.6   When required, continuation/additional sheets and attachments shall include the same reference number as the original document.

Reference Annex A, the data fields "Nonconformity Description" (see No. 19) and "Disposition" (see No. 25) may be presented either as a summary or in a clearly defined sub-structure (see No. 19 a-i and No. 25 a-e).

4.7   The forms may be pre-printed, computer generated, or accessed via a net-based system (intranet/internet), but in all cases, the printing of lines and characters shall be clear and legible. The details entered on the forms shall preferably be machine/computer printed, but may be handwritten as long as upper case letters are used and the document remains legible.

The use of abbreviations should be kept at a minimum.

4.8   The information shall be in English, but other languages may be acceptable (e.g. bilingual: English and native) when specified in the contract.

The use of abbreviations should be kept to a minimum.

5   Code catalogue

5.1 General

The following codes are recommended for codifying affected processes, causes of process deviations, and corrections made to remedy the nonconformity. If codes are defined by a contract and/or the originators already have codes defined that satisfy their needs, these codes shall take precedence over those proposed in the following sections.

NOTE   The following codes represent a minimum selection of possible variances. In case of needing additional code definitions (e.g. software, electronic, composites, structures), the tables can be enhanced by using the existing structure.

5.2 Nonconformity Process Codes

A product nonconformity is typically associated with a process deviation. See Table 1 for a list of codes.

5.3 Nonconformity Cause Codes

The causes of process deviations are defined in Table 2. The categorization of the list is set up to facilitate the use of process improvement tools (e.g. cause and effect diagram). The "Main Term" code can be used as the cause code, if appropriate, or further definition may be provided.

One or more cause codes may be used to define the cause(s) for a product nonconformity.

NOTE   The allocation of a cause code could be either apparent (preliminary/initial) or final, depending on the status of root cause analysis. For further support, see EN 9136 and the SCMH ("Root Cause Analysis and Problem Solving" chapter).

5.4 Nonconformity Corrective Action Codes

Common corrective action codes are defined in Table 3; intended to correspond directly to the cause codes identified in Table 2, as appropriate.

One or more corrective action codes may be used to define the corrective action(s) taken for a product nonconformity/cause code.

Table 1 — Nonconformity process codes

Main Term	Process code	Definition/Description
P1 – Shipping and Transportation	P11	Shipping
	P12	Transportation
	P13	Order Preparation
	P14	Preparation of Packaging
	P15	Packaging
P2 – Manufacturing	P201	Assembly
	P202	Test
	P203	Balancing
	P204	Benching
	P205	Blasting
	P206	Bonding
	P207	Brazing
	P208	Broaching
	P209	Casting
	P210	Cleaning
	P211	Coating
	P212	Composite Manufacturing
	P213	Crimping
	P214	Deburring
	P215	Drilling
	P216	Electrochemical Processing

Main Term	Process code	Definition/Description
	P217	Etching
	P218	Forging
	P219	Forming
	P220	Grinding
	P221	Heat Treatment
	P222	Precision Hole Making
	P223	Honing and Lapping
	P224	Hot Isostatic Pressing
	P225	Inspection
	P226	Machining
	P227	Marking
	P228	Melting
	P229	Milling
	P230	Molding
	P231	Painting
	P232	Peening
	P233	Plating
	P234	Polishing
	P235	Riveting
	P236	Rolling/Pressing
	P237	Soldering
	P238	Stamping
	P239	Surface Treatment
	P240	Turning
	P241	Welding
	P242	Additive Manufacturing
P3 – Document Preparation	P31	Documentation Error
	P32	Incomplete