

SVENSK STANDARD

SS-EN 16602-10-09:2014



Fastställt/Approved: 2014-09-14
Publicerad/Published: 2014-09-15
Utgåva/Edition: 1
Språk/Language: engelska/English
ICS: 49.140

Flyg- och rymdteknik – Avvikelser i kontrollsystem

Space product assurance – Nonconformance control system



Standarder får världen att fungera

SIS (Swedish Standards Institute) är en fristående ideell förening med medlemmar från både privat och offentlig sektor. Vi är en del av det europeiska och globala nätverk som utarbetar internationella standarder. Standarder är dokumenterad kunskap utvecklad av framstående aktörer inom industri, näringsliv och samhälle och befrämjar handel över gränser, bidrar till att processer och produkter blir säkrare samt effektiviserar din verksamhet.

Delta och påverka

Som medlem i SIS har du möjlighet att påverka framtida standarder inom ditt område på nationell, europeisk och global nivå. Du får samtidigt tillgång till tidig information om utvecklingen inom din bransch.

Ta del av det färdiga arbetet

Vi erbjuder våra kunder allt som rör standarder och deras tillämpning. Hos oss kan du köpa alla publikationer du behöver – allt från enskilda standarder, tekniska rapporter och standardpaket till handböcker och onlinetjänster. Genom vår webbtjänst e-nav får du tillgång till ett lättnavigerat bibliotek där alla standarder som är aktuella för ditt företag finns tillgängliga. Standarder och handböcker är källor till kunskap. Vi säljer dem.

Utveckla din kompetens och lyckas bättre i ditt arbete

Hos SIS kan du gå öppna eller företagsinterna utbildningar kring innehåll och tillämpning av standarder. Genom vår närhet till den internationella utvecklingen och ISO får du rätt kunskap i rätt tid, direkt från källan. Med vår kunskap om standarders möjligheter hjälper vi våra kunder att skapa verklig nytta och lönsamhet i sina verksamheter.

Vill du veta mer om SIS eller hur standarder kan effektivisera din verksamhet är du välkommen in på www.sis.se eller ta kontakt med oss på tel 08-555 523 00.



Standards make the world go round

SIS (Swedish Standards Institute) is an independent non-profit organisation with members from both the private and public sectors. We are part of the European and global network that draws up international standards. Standards consist of documented knowledge developed by prominent actors within the industry, business world and society. They promote cross-border trade, they help to make processes and products safer and they streamline your organisation.

Take part and have influence

As a member of SIS you will have the possibility to participate in standardization activities on national, European and global level. The membership in SIS will give you the opportunity to influence future standards and gain access to early stage information about developments within your field.

Get to know the finished work

We offer our customers everything in connection with standards and their application. You can purchase all the publications you need from us - everything from individual standards, technical reports and standard packages through to manuals and online services. Our web service e-nav gives you access to an easy-to-navigate library where all standards that are relevant to your company are available. Standards and manuals are sources of knowledge. We sell them.

Increase understanding and improve perception

With SIS you can undergo either shared or in-house training in the content and application of standards. Thanks to our proximity to international development and ISO you receive the right knowledge at the right time, direct from the source. With our knowledge about the potential of standards, we assist our customers in creating tangible benefit and profitability in their organisations.

If you want to know more about SIS, or how standards can streamline your organisation, please visit www.sis.se or contact us on phone +46 (0)8-555 523 00



Europastandarden EN 16602-10-09:2014 gäller som svensk standard. Detta dokument innehåller den officiella engelska versionen av EN 16602-10-09:2014.

Denna standard ersätter SS-EN 14097, utgåva 1.

The European Standard EN 16602-10-09:2014 has the status of a Swedish Standard. This document contains the official version of EN 16602-10-09:2014.

This standard supersedes the Swedish Standard SS-EN 14097, edition 1.

© Copyright/Upphovsrätten till denna produkt tillhör SIS, Swedish Standards Institute, Stockholm, Sverige. Användningen av denna produkt regleras av slutanvändarlicensen som återfinns i denna produkt, se standardens sista sidor.

© Copyright SIS, Swedish Standards Institute, Stockholm, Sweden. All rights reserved. The use of this product is governed by the end-user licence for this product. You will find the licence in the end of this document.

Uppllysningar om sakinnehållet i standarden lämnas av SIS, Swedish Standards Institute, telefon 08-555 520 00. Standarder kan beställas hos SIS Förlag AB som även lämnar allmänna uppllysningar om svensk och utländsk standard.

Information about the content of the standard is available from the Swedish Standards Institute (SIS), telephone +46 8 555 520 00. Standards may be ordered from SIS Förlag AB, who can also provide general information about Swedish and foreign standards.

Har du synpunkter på innehållet i den här standarden, vill du delta i ett kommande revideringsarbete eller vara med och ta fram andra standarder inom området? Gå in på www.sis.se - där hittar du mer information.

EUROPEAN STANDARD

EN 16602-10-09

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 2014

ICS 49.140

Supersedes EN 14097:2001

English version

Space product assurance - Nonconformance control system

Assurance produit des projets spatiaux - Système de
contrôle des non-conformitésRaumfahrtproduktsicherung - Nichtkonformitäts-
/Abweichungs-Kontrollsystem

This European Standard was approved by CEN on 1 March 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**

Table of contents

Foreword	4
1 Scope.....	5
2 Normative references	6
3 Terms, definitions and abbreviated terms.....	7
3.1 Terms from other standards.....	7
3.2 Terms specific to the present standard	7
3.3 Abbreviated terms.....	8
4 Nonconformance control system principles.....	10
4.1 Process and objectives	10
4.2 Detection and immediate actions	10
4.3 Nonconformance review board (NRB)	11
4.3.1 Internal NRB	11
4.3.2 Customer NRB.....	12
4.4 Corrective and preventive actions.....	12
4.5 Implementation of actions and nonconformance close-out.....	13
4.6 Documentation	13
5 Nonconformance processing requirements	14
5.1 Detection and immediate actions	14
5.2 Nonconformance Review Board	15
5.2.1 General.....	15
5.2.2 Processing by internal NRB	15
5.2.3 Processing by customer NRB	17
5.3 Corrective and preventive actions.....	18
5.4 Implementation of actions and nonconformance close-out.....	19
5.4.1 Implementation of actions	19
5.4.2 Nonconformance close-out	19
5.5 Documentation	20
5.5.1 Formats for nonconformance reporting	20
5.5.2 Nonconformance database	20

5.5.3	Analysis of records.....	20
6	Special nonconformance control requirements	22
6.1	EEE components nonconformances	22
6.1.1	Applicability.....	22
6.1.2	Basic requirements	22
6.1.3	Processing requirements.....	22
6.2	Software nonconformances	23
6.2.1	Applicability.....	23
6.2.2	Basic requirements	23
6.3	Operational nonconformances and anomalies	23
6.3.1	Applicability.....	23
6.3.2	Basic requirements	24
6.3.3	Processing requirements.....	25
	Annex A (normative) Nonconformance Report – DRD	26
	Annex B (normative) NCR Status List - DRD.....	31
	Annex C (informative) Nonconformance report template	33
	Bibliography.....	38
	Figures	
	Figure 4-1: Nonconformance processing flow chart.....	11
	Tables	
	Table C-1 : Description of the NCR data requirements.....	35

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).

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 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,