

DIN EN 16602-10-04

ICS 49.140

**Raumfahrtproduktsicherung –
Kontrolle von kritischen Teilen;
Englische Fassung EN 16602-10-04:2014**

Space product assurance –
Critical-item control;
English version EN 16602-10-04:2014

Assurance produit des projets spatiaux –
Contrôle des éléments critiques;
Version anglaise EN 16602-10-04:2014

Gesamtumfang 32 Seiten

DIN-Normenausschuss Luft- und Raumfahrt (NL)

Nationales Vorwort

Dieses Dokument (EN 16602-10-04:2014) wurde vom Technischen Komitee CEN/CLC/TC 5 „Raumfahrt“ erarbeitet, dessen Sekretariat vom DIN (Deutschland) gehalten wird.

Das zuständige deutsche Normungsgremium ist der Arbeitsausschuss NA 131-10-01 AA „Interoperabilität von Informations-, Kommunikations- und Navigationssystemen“ im DIN-Normenausschuss Luft- und Raumfahrt (NL).

Dieses Dokument (EN 16602-10-04:2014) basiert auf ECSS-Q-ST-10-04C.

Dieses Dokument enthält unter Berücksichtigung des DIN-Präsidialbeschlusses 1/2004 nur die englische Originalfassung von EN 16602-10-04:2014.

Dieses Dokument wurde speziell zur Behandlung von Raumfahrtsystemen erarbeitet und hat daher Vorrang vor jeglicher Europäischer Norm, da es denselben Anwendungsbereich hat, jedoch über einen größeren Geltungsbereich (z. B. Luft- und Raumfahrt) verfügt.

Nationaler Anhang NA (informativ)

Begriffe und Abkürzungen

3 Begriffe und Abkürzungen

3.1 Begriffe, die in anderen Normen festgelegt sind

Für die Anwendung dieses Dokuments gelten die Begriffe nach ECSS-S-ST-00-01 und die folgende Benennung:

kritische Einheit

3.2 Abkürzungen

Für die Anwendung dieses Dokuments gelten die Abkürzungen in ECSS-S-ST-00-01 und die folgenden Abkürzungen:

Abkürzung	Bedeutung
CI	kritische Einheit (en: critical item)
CIL	Liste für kritische Teile (en: critical-item list)
PMP	Teile, Materialien und Prozesse (en: parts, materials and processes)
SPF	Einzelausfall (en: single-point failure)

— Leerseite —

English version

Space product assurance - Critical-item control

Assurance produit des projets spatiaux - Contrôle des
éléments critiques

Raumfahrtproduktsicherung - Kontrolle von kritischen
Teilen

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
Introduction.....	5
1 Scope.....	6
2 Normative references	7
3 Terms, definitions and abbreviated terms.....	8
3.1 Terms defined in other standards	8
3.2 Abbreviated terms.....	8
4 Overview of the critical-item control process	9
4.1 General.....	9
4.2 Critical-item control process.....	9
4.2.1 Critical items and critical-item control	9
4.2.2 Interfaces between critical-item control and risk management	9
4.2.3 Interfaces between critical-item control and product assurance.....	10
4.2.4 Interfaces between critical-item control and product engineering	10
4.2.5 Integration of CI control activities	11
5 Requirements.....	12
5.1 Critical-item control process.....	12
5.1.1 General requirements	12
5.2 Implementation requirements	13
5.2.1 General	13
5.2.2 Step 1: Define CI control requirement	13
5.2.3 Step 2: Identify and classify the critical items	14
5.2.4 Step 3: Decide and act.....	15
5.2.5 Step 4: Communicate and close-out	16
5.3 Integration of CI control activities	16
5.3.1 Consolidation and gathering method	16

5.3.2	Preliminary design review (PDR).....	17
5.3.3	Critical design review (CDR)	17
5.3.4	Acceptance review (AR).....	17
Annex A (normative) Critical-item list - DRD.....		19
Annex B (informative) Critical-item control form.....		22
Annex C (informative) Check-list for potential critical items.....		25
Annex D (informative) Examples of critical-item control measures		27
Bibliography.....		28
 Figures		
Figure 4-1: Critical-item control process, and its relation to the risk management process		10
Figure 5-1: Tasks associated with the 4-step approach of the CI control process.....		13
Figure B- 1 Example of a critical–item identification list (CIL form).....		23
Figure B- 2 Example of a critical–item control sheet		24

Foreword

This document (EN 16602-10-04:2014) has been prepared by Technical Committee CEN/CLC/TC 5 "Space", the secretariat of which is held by DIN.

This standard (EN 16602-10-04:2014) originates from ECSS-Q-ST-10-04C.

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.

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 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.

Introduction

Early identification of potential critical items provides valuable inputs to design engineering for their avoidance or elimination. Critical-item control provides management with acceptance rationale for those critical items that cannot be eliminated from the critical-item list, and identifies the means by which emanating risks can be controlled.

This Standard provides the requirements for the implementation of the critical-item control process as described in ECSS-Q-ST-10.

1

Scope

This Standard defines the principles, process, implementation and requirements for critical-items control.

Clause 4 is the informative part of this Standard whereas clause 5 and Annex A form the normative part.

This standard may be tailored for the specific characteristics and constraints of a space project, in accordance with ECSS-S-ST-00.