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I.S. EN 62741:2015

Demonstration of dependability requirements - The dependability case

I.S. EN 62741:2015

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EUROPEAN STANDARD

EN 62741

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2015

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English Version

**Demonstration of dependability requirements -
The dependability case
(IEC 62741:2015)**

Démonstration des exigences de sûreté de fonctionnement
- Argumentaire dans le cadre de la sûreté de
fonctionnement
(IEC 62741:2015)

Leitfaden zur Darlegung von Zuverlässigkeitsanforderungen
- Der Zuverlässigkeitsnachweis
(IEC 62741:2015)

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Foreword

The text of document 56/1591/FDIS, future edition 1 of IEC 62741, prepared by IEC/TC 56 "Dependability" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62741:2015.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2015-12-24
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IEC 60300-3-1	NOTE	Harmonized as EN 60300-3-1.
IEC 60300-3-4	NOTE	Harmonized as EN 60300-3-4.
IEC 61078	NOTE	Harmonized as EN 61078.
IEC 62347	NOTE	Harmonized as EN 62347.
IEC/ISO 31010	NOTE	Harmonized as EN 31010.
IEC 62198	NOTE	Harmonized as EN 62198.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60050-192	-	International electrotechnical vocabulary - Part 192: Dependability	-	-
IEC 60300-1	-	Dependability management -- Part 1: Guidance for management and application	EN 60300-1	-
ISO 31000	-	Risk management - Principles and guidelines	-	-

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IEC 62741

Edition 1.0 2015-02

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Demonstration of dependability requirements – The dependability case

Démonstration des exigences de sûreté de fonctionnement – Argumentaire dans le cadre de la sûreté de fonctionnement





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IEC 62741

Edition 1.0 2015-02

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Demonstration of dependability requirements – The dependability case

**Démonstration des exigences de sûreté de fonctionnement – Argumentaire
dans le cadre de la sûreté de fonctionnement**

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**DEMONSTRATION OF DEPENDABILITY REQUIREMENTS –
THE DEPENDABILITY CASE**
FOREWORD

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International Standard IEC 62741 has been prepared by IEC technical committee 56: Dependability.

The text of this standard is based on the following documents:

FDIS	Report on voting
56/1591/FDIS	56/1609/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

INTRODUCTION

Dependability is the ability to perform as and when required. Acceptable levels of dependability are therefore essential for continued performance and optimized life cycle costs.

In order to achieve dependability of a system, dependability requirements should be established, the risks of not meeting them identified and a suitable set of activities developed to meet and demonstrate the requirements and manage the risks. A dependability case provides a convenient and convincing means of recording the output of these activities in a single location and presenting an argument, supported by evidence, that risks have been treated and that the necessary dependability has been or will be achieved and will continue to be achieved over time. It serves as the main means of communication on dependability among customers, suppliers and other stakeholders and promotes cooperation among them. This is essential for dependability achievement and providing assurance as part of the customer/supplier relationship.

Preparing a dependability case can also improve dependability through the actions taken to prepare and develop the argument within the dependability case. It can improve the cost effectiveness of a dependability programme because if an activity does not provide evidence to support the case, this may indicate that the activity is not necessary.

The activities required for the achievement of dependability depend on the nature and development state of the system and are likely to vary significantly from one project to another.

Throughout this International Standard, the term "dependability" includes all aspects of reliability, availability, maintainability and supportability, as well as other attributes such as usability, testability and durability. In addition, dependability of a system includes all aspects of that system, including components, processes, hardware, software and the interfaces between them.

This standard is intended as guidance: the guidelines are not prescriptive in nature, they are generic, they should be tailored to the specific objectives and are not exhaustive.

This standard does not address safety or the environment.

DEMONSTRATION OF DEPENDABILITY REQUIREMENTS – THE DEPENDABILITY CASE

1 Scope

This International Standard gives guidance on the content and application of a dependability case and establishes general principles for the preparation of a dependability case.

This standard is written in a basic project context where a customer orders a system that meets dependability requirements from a supplier and then manages the system until its retirement. The methods provided in this standard may be modified and adapted to other situations as needed.

The dependability case is normally produced by the customer and supplier but can also be used and updated by other organizations. For example, certification bodies and regulators may examine the submitted case to support their decisions and users of the system may update/expand the case, particularly where they use the system for a different purpose.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60050-192, *International Electrotechnical Vocabulary – Part 192: Dependability* ¹

IEC 60300-1, *Dependability management – Part 1: Guidance for management and application*

ISO 31000, *Risk management – Principles and guidelines*

3 Terms, definitions and abbreviations

For the purposes of this document, the terms and definitions given in IEC 60050-192, as well as the following, apply.

3.1 Terms and definitions

3.1.1

dependability case

evidence-based, reasoned, traceable argument created to support the contention that a defined system does and/or will satisfy the dependability requirements

3.1.2

evidence framework

structure identifying what evidence will be/has been produced and when

¹ To be published.

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