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OHUTUSEGA SEOTUD OSAD. OSA 2: VALIDEERIMINE

Safety of machinery - Safety-related parts of control
systems - Part 2: Validation (ISO 13849-2:2012)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 13849-2:2012 sisaldab Euroopa standardi EN ISO 13849-2:2012 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 13849-2:2012 consists of the English text of the European standard EN ISO 13849-2:2012.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 15.10.2012.	Date of Availability of the European standard is 15.10.2012.
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English Version

Safety of machinery - Safety-related parts of control systems -
Part 2: Validation (ISO 13849-2:2012)

Sécurité des machines - Parties des systèmes de
commande relatives à la sécurité - Partie 2: Validation (ISO
13849-2:2012)

Sicherheit von Maschinen - Sicherheitsbezogene Teile von
Steuerungen - Teil 2: Validierung (ISO 13849-2:2012)

This European Standard was approved by CEN on 14 October 2012.

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Foreword

This document (EN ISO 13849-2:2012) has been prepared by Technical Committee ISO/TC 199 “Safety of machinery” in collaboration with Technical Committee CEN/TC 114 “Safety of machinery” the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by April 2013, and conflicting national standards shall be withdrawn at the latest by April 2013.

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 ISO 13849-2:2008.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive.

For relationship with EU Directive, see informative Annex ZA, which is an integral part of this document.

According to the CEN/CENELEC Internal Regulations, the national standards organisations 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.

Endorsement notice

The text of ISO 13849-2:2012 has been approved by CEN as a EN ISO 13849-2:2012 without any modification.

Annex ZA
(informative)
**Relationship between this European Standard and the Essential
Requirements of EU Directive 2006/42/EC**

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association to provide a means of conforming to Essential Requirements of the New Approach Directive Machinery, 2006/42/EC.

Once this standard is cited in the Official Journal of the European Union under that Directive and has been implemented as a national standard in at least one Member State, compliance with the normative clauses of this standard confers, within the limits of the scope of this standard, a presumption of conformity with the relevant Essential Requirements 1.2.1 of that Directive and associated EFTA regulations.

WARNING — Other requirements and other EU Directives may be applicable to the product(s) falling within the scope of this standard.

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Introduction

The structure of safety standards in the field of machinery is as follows:

- a) type-A standards (basic safety standards) giving basic concepts, principles for design and general aspects that can be applied to machinery;
- b) type-B standards (generic safety standards) dealing with one safety aspect or one type of safeguard that can be used across a wide range of machinery:
 - type-B1 standards on particular safety aspects (for example safety distances, surface temperature, noise);
 - type-B2 standards on safeguards (for example two-hand controls, interlocking devices, pressure-sensitive devices, guards);
- c) type-C standards (machine safety standards) dealing with detailed safety requirements for a particular machine or group of machines.

This document is a type-B standard as stated in ISO 12100.

The requirements of this document can be supplemented or modified by a type-C standard.

For machines which are covered by the scope of a type-C standard and which have been designed and built according to the requirements of that standard, the requirements of that type-C standard take precedence.

This part of ISO 13849 specifies the validation process for the safety functions, categories and performance levels for the safety-related parts of control systems. It recognizes that the validation of safety-related parts of control systems can be achieved by a combination of analysis (see Clause 5) and testing (see Clause 6), and specifies the particular circumstances in which testing ought to be carried out.

Most of the procedures and conditions in this part of ISO 13849 are based on the assumption that the simplified procedure for estimating the performance level (PL) described in ISO 13849-1:2006, 4.5.4, is used. This part of ISO 13849 does not provide guidance for situations when other procedures are used to estimate PL (e.g. Markov modelling), in which case some of its provisions will not apply and additional requirements can be necessary.

Guidance on the general principles for the design (see ISO 12100) of safety-related parts of control systems, regardless of the type of technology used (electrical, hydraulic, pneumatic, mechanical, etc.), is provided in ISO 13849-1. This includes descriptions of some typical safety functions, determination of their required performance levels, and general requirements of categories and performance levels.

Within this part of ISO 13849, some of the validation requirements are general, whereas others are specific to the type of technology used.