

SLOVENSKI STANDARD SIST EN ISO 13849-1:2008/oprA1:2013

01-november-2013

Varnost strojev - Z varnostjo povezani deli krmilnih sistemov - 1. del: Splošna načela za načrtovanje (ISO 13849-1:2006/DAM 1:2013)

Safety of machinery - Safety-related parts of control systems - Part 1: General principles for design (ISO 13849-1:2006/DAM 1:2013)

Sicherheit von Maschinen - Sicherheitsbezogene Teile von Steuerungen - Teil 1: Allgemeine Gestaltungsleitsätze (ISO 13849-1:2006/DAM 1:2013)

Sécurité des machines - Parties des systèmes de commande relatives à la sécurité -Partie 1: Principes généraux de conception (ISO 13849-1:2006/DAM 1:2013)

Ta slovenski standard je istoveten z: EN ISO 13849-1:2008/prA1

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<u>ICS:</u>

13.110 Varnost strojev

Safety of machinery

SIST EN ISO 13849-1:2008/oprA1:2013 en,fr,de

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ISO

DRAFT AMENDMENT ISO 13849-1:2006/DAM 1

ISO/TC 199

Secretariat: DIN

Voting begins on **2013-08-29**

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INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • MEXCYHAPODHAR OPFAHU3ALUR ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Safety of machinery — Safety-related parts of control systems —

Part 1: General principles for design

AMENDMENT 1

Sécurité des machines — Parties des systèmes de commande relatives à la sécurité — Partie 1: Principes généraux de conception AMENDEMENT 1

ICS 13.110

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ISO/CEN PARALLEL PROCESSING

This draft has been developed within the International Organization for Standardization (ISO), and processed under the **ISO-lead** mode of collaboration as defined in the Vienna Agreement.

This draft is hereby submitted to the ISO member bodies and to the CEN member bodies for a parallel five-month enquiry.

Should this draft be accepted, a final draft, established on the basis of comments received, will be submitted to a parallel two-month approval vote in ISO and formal vote in CEN.

To expedite distribution, this document is circulated as received from the committee secretariat. ISO Central Secretariat work of editing and text composition will be undertaken at publication stage.

Pour accélérer la distribution, le présent document est distribué tel qu'il est parvenu du secrétariat du comité. Le travail de rédaction et de composition de texte sera effectué au Secrétariat central de l'ISO au stade de publication.

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Foreword

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Amendment 1 to ISO 13849-1:2006 was prepared by Technical Committee ISO/TC 199, Safety of machinery and by Technical Committee CEN/TC 114, Safety of machinery in collaboration.

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Safety of machinery — Safety-related parts of control systems — Part 1: General principles for design

AMENDMENT 1

Foreword

Last paragraph:

Delete reference to "ISO 13849-100" since Part 100 had been withdrawn

Introduction

Paragraph after listing:

Update reference "ISO 12100-1" to "ISO 12100"

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5th paragraph:

Update reference "Council Directive 98/37/EC, The machinery Directive" to "Directive 2006/42/EC on machinery"

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Table 1 and paragraph before Table 1:

Replace Table 1 and the paragraph before Table 1 by the following paragraph:

"IEC 62061 and this part of ISO 13849 specify requirements for the design and implementation of safetyrelated control systems of machinery. The use of either of these International Standards, in accordance with their scopes, can be presumed to fulfil the relevant essential safety requirements. ISO/TR 23849 gives guidance on the application of ISO 13849-1 and IEC 62061 in the design of safety-related control systems for machinery."

Add the following table headline after the new paragraph, in order to avoid the renumbering of all tables and the respective references:

"Table 1 deleted"

ISO 13849-1:2006/DAM 1

Scope

Replace NOTE 5 by new NOTE 5:

"NOTE 5 ISO 13849-1 covers high demand and continuous mode."

Normative references

Delete references:

"ISO 12100-1:2003, Safety of machinery — Basic concepts, general principles for design — Part 1: Basic terminology, methodology

ISO 12100-2:2003, Safety of machinery — Basic concepts, general principles for design — Part 2: Technical principles

ISO 14121, Safety of machinery — Principles of risk assessment"

Add reference:

"ISO 12100:2010 Safety of machinery — General principles for design — Risk assessment and risk reduction"

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3.1 Terms and definitions

Update reference by replacing "ISO 12100-1" by "ISO 12100"

Prev

3.1.6

Update source in NOTE by replacing "(see ISO 12100-1:2003, 3.34)" by "(see ISO 12100:2010, 3.36)"

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Update source of definition by replacing "[ISO 12100-1:2003, 3.5]" by "[ISO 12100:2010, 3.5]"

3.1.11

Update source of definition by replacing "[ISO 12100-1:2003, 3.6]" by "[ISO 12100:2010, 3.6, modified]"

3.1.12

Update source of definition by replacing "[ISO 12100-1:2003, 3.9]" by "[ISO 12100:2010, 3.10]"

3.1.13

Update source of definition by replacing "[ISO 12100-1:2003, 3.11]" by "[ISO 12100:2010, 3.12]"

3.1.14

Update reference in NOTE by replacing "ISO 12100-1:2003, definition 3.12" by "ISO 12100:2010, definition 3.13"

3.1.15

Update source of definition by replacing "[ISO 12100-1:2003, 3.13]" by "[ISO 12100:2010, 3.17]"

3.1.16

Update source of definition by replacing "[ISO 12100-1:2003, 3.14]" by "[ISO 12100:2010, 3.15]"

3.1.17

Update source of definition by replacing "[ISO 12100-1:2003, 3.16]" by "[ISO 12100:2010, 3.16]"

3.1.18

Update source of definition by replacing "[ISO 12100-1:2003, 3.22]" by "[ISO 12100:2010, 3.23]"

3.1.19

Update source of definition by replacing "[ISO 12100-1:2003, 3.23]" by "[ISO 12100:2010, 3.24]"

3.1.20

Update source of definition by replacing "[ISO 12100-1:2003, 3.28]" by "[ISO 12100:2010, 3.30]"

3.1.27

Update reference in NOTE by replacing "ISO 12100-1:2003, definition 3.18" by "ISO 12100:2010, definition 3.19"

Add new definition 3.1.38: Document Preview

"3.1.38

high demand or continuous mode SISTEN ISO 13849-12016 mode of operation in which the frequency of demands on a SRP/CS is greater than one per year"

3.2 Symbols and abbreviated terms

Add in Table 2:

PFH _D	average probability of dangerous failure per hour	Table 3
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4.1 Safety objectives in design

First paragraph:

Delete the reference "and ISO 14121" in the first sentence.

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Replace Figure 1 with the following Figure (this new figure contains no technical modifications, but updates the references).



^a Refers to ISO 12100:2010.

^b Refers to this part of ISO 13849.

4.2.1 General

First paragraph:

In order to update the references, replace first sentence with:

"The strategy for risk reduction at the machine is given in ISO 12100:2010, Clause 6."

Second paragraph:

In order to update the references, replace the three items with:

- "
- hazard elimination or risk reduction by design (see ISO 12100:2010, 6.2);
- risk reduction by safeguarding and possibly complementary protective measures (see ISO 12100:2010, 6.3);
- risk reduction by the provision of information for use about the residual risk (see ISO 12100:2010, 6.4).
- "

4.2.2 Contribution to the risk reduction by the control system

First paragraph, 4th sentence:

Replace the word "safeguard" with "interlocking guard"

Third paragraph, 2nd sentence:

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Change the sentence into "Five performance levels are set out, from the lowest PL a to the highest PL e with or defined ranges of probability of a dangerous failure per hour (see Table 3)."

Fourth paragraph, below Table 3:

Replace "(see ISO 14121)" with "(see ISO 12100)"

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Figure 3:

Change the reference by replacing at the bottom of Figure 3 "To Figure 1 (ISO 12100)" with "To Figure 1"



^a ISO 13849-2 provides additional help for the validation.