



SLOVENSKI STANDARD
SIST EN 1247:2004/kFprA1:2010
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Livarski stroji - Varnostne zahteve za livne ponve, opremo za vlivanje, stroje za centrifugalno vlivanje ter stroje za kontinuirno in polkontinuirno vlivanje

Foundry machinery - Safety requirements for ladles, pouring equipment, centrifugal casting machines, continuous and semi continuous casting machines

Gießereimaschinen - Sicherheitsanforderungen für Pfannen, Gießeinrichtungen, Schleudergießmaschinen kontinuierliche und halbkontinuierliche Stranggießmaschinen

Machines de fonderie - Prescriptions de sécurité concernant les poches, les matériels de coulée, les machines à couler par centrifugation, les machines à couler en continu ou en semi-continu

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ICS:

25.120.30 Livarska oprema Moulding equipment

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English Version

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Stranggießmaschinen

This draft amendment is submitted to CEN members for unique acceptance procedure. It has been drawn up by the Technical Committee CEN/TC 202.

This draft amendment A1, if approved, will modify the European Standard EN 1247:2004. If this draft becomes an amendment, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for inclusion of this amendment into the relevant national standard without any alteration.

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Foreword

This document (EN 1247:2004/FprA1:2009) has been prepared by Technical Committee CEN/TC 202 "Foundry machinery", the secretariat of which is held by DIN.

This document is currently submitted to the Unique Acceptance Procedure.

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(s).

For relationship with EU Directive(s), see informative Annexes ZA and ZB, which are integral parts of this document.

The new safety requirements as stated in this document comply with the additional relevant Essential Requirements of the new Machinery Directive 2006/42/EC complementing the existing Machinery Directive 98/37/EC.

Once this document is cited in the Official Journal of the European Union under the new Machinery Directive 2006/42/EC and has been implemented as a national standard in at least one member state, it confers a presumption of conformity with the new relevant Essential Requirements of that new Directive and associated EFTA regulations.

1 Modification to the Foreword

Replace the 4th paragraph "For relationship with EU Directive(s), see ..." with the following:

"For relationship with EU Directive(s), see informative Annexes ZA and ZB, which are integral parts of this document."

2 Modification to the Introduction

Replace the existing text with the following:

"This European Standard is a type C standard as stated in EN ISO 12100.

The machinery concerned and the extent to which hazards, hazardous situations and events are covered are indicated in the scope of this European Standard.

When provisions of this type C standard are different from those which are stated in type A or B standards, the provisions of this type C standard take precedence over the provisions of the other standards, for machines that have been designed and built according to the provisions of this type C standard.

Where for clarity an example of a preventative measure is given in the text, this should not be considered as the only possible solution. Other solutions can be used as far as they fulfil correctly the criteria expressed in the requirement.

This European Standard assumes, that the equipment is operated and maintained by trained personnel."

3 Modification to the Scope

Add at the end of the Scope the following:

"This document is not applicable to ladles, pouring equipment, centrifugal casting machines and continuous and semi-continuous casting machines which are manufactured before the date of its publication as EN."

4 Modification to Clause 2, Normative references

Replace the list of standards with the following:"

EN 349, *Safety of machinery — Minimum gaps to avoid crushing of parts of the human body*

EN 626-1, *Safety of machinery — Reduction of risks to health from hazardous substances emitted by machinery — Part 1: Principles and specifications for machinery manufacturers*

EN 626-2, *Safety of machinery — Reduction of risk to health from hazardous substances emitted by machinery — Part 2: Methodology leading to verification procedures*

EN 746-2:1997, *Industrial thermoprocessing equipment — Part 2: Safety requirements for combustion and fuel handling systems*

EN 842, *Safety of machinery — Visual danger signals — General requirements, design and testing*

EN 953, *Safety of machinery — Guards — General requirements for the design and construction of fixed and movable guards*

EN 981, *Safety of machinery — System of auditory and visual danger and information signals*

EN 982, *Safety of machinery — Safety requirements for fluid power systems and their components — Hydraulics*

EN 983, *Safety of machinery — Safety requirements for fluid power systems and their components — Pneumatics*

EN 1037, *Safety of machinery — Prevention of unexpected start-up*

EN 1088, *Safety of machinery — Interlocking devices associated with guards — Principles for design and selection*

EN 1265:1999+A1:2008, *Safety of machinery — Noise test code for foundry machines and equipment*

EN 60204-1:2006, *Safety of machinery — Electrical equipment of machines — Part 1: General requirements (IEC 60204-1:2005, modified)*

EN 60519-1:2003, *Safety in electroheat installations — Part 1: General requirements (IEC 60519-1:2003)*

EN 60529, *Degrees of protection provided by enclosures (IP code) (IEC 60529:1989)*

EN 61310-1, *Safety of machinery — Indication, marking and actuation — Part 1: Requirements for visual, acoustic and tactile signals (IEC 61310-1:2007)*

EN 61310-2, *Safety of machinery — Indication, marking and actuation — Part 2: Requirements for marking (IEC 61310-2:2007)*

EN ISO 4871, *Acoustics — Declaration and verification of noise emission values of machinery and equipment (ISO 4871:1996)*

EN ISO 7731, *Ergonomics — Danger signals for public and work areas — Auditory danger signals (ISO 7731:2003)*

EN ISO 11688-1, *Acoustics — Recommended practice for the design of low-noise machinery and equipment — Part 1: Planning (ISO/TR 11688-1:1995)*

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

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

EN ISO 13849-1:2008, *Safety of machinery — Safety-related parts of control systems — Part 1: General principles for design (ISO 13849-1:2006)*

EN ISO 13850, *Safety of machinery — Emergency stop — Principles for design (ISO 13850:2006)*

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EN ISO 13857, *Safety of machinery — Safety distances to prevent hazard zones being reached by upper and lower limbs (ISO 13857:2008)*

EN ISO 14122-1, *Safety of machinery — Permanent means of access to machinery — Part 1: Choice of fixed means of access between two levels (ISO 14122-1:2001)*

EN ISO 14122-2, *Safety of machinery — Permanent means of access to machinery — Part 2: Working platforms and walkways (ISO 14122-2:2001)*

EN ISO 14122-3, *Safety of machinery — Permanent means of access to machinery — Part 3: Stairs, stepladders and guard-rails (ISO 14122-3:2001)*

EN ISO 14122-4, *Safety of machinery — Permanent means of access to machinery — Part 4: Fixed ladders (ISO 14122-4:2004)*

ISO 3864-1, *Graphical symbols — Safety colours and safety signs — Part 1: Design principles for safety signs in workplaces and public areas*

ISO 7000, *Graphical symbols for use on equipment — Index and synopsis*

ISO 7745, *Hydraulic fluid power — Fire-resistant (FR) fluids — Guidelines for use*

CLC/TR 50404, *Electrostatics — Code of practice for the avoidance of hazards due to static electricity*

5 Modifications (except Clause 2) regarding new referenced standards

Replace "EN 418" with

"EN ISO 13850"

Replace in sub-clauses 5.3.10 and 5.4.6 "EN 954-1" with

"EN ISO 13849-1"

Replace in Table 1 "EN 60204-1:1997" with

"EN 60204-1:2006"

Replace in sub-clause 5.5.5 "prEN ISO 14122-4" with

"EN ISO 14122-4"

Replace in sub-clause 5.3.11 "EN 60519-1:1993" with

"EN 60519-1:2003"

Replace in sub-clause 5.3.13 the reference "6.2 and 7.2.6 of CENELEC R044-001,1999" with:

"According to CLC/TR 50404"

6 Modification to Clause 3, Terms and Definitions

Replace the 1st sentence with the following paragraph and Note:

"For the purposes of this document, the terms and definitions given in EN ISO 12100-1:2003 and the following apply.

NOTE Definitions used in EN and ISO standards referred to in this European Standard are also valid for this European Standard."

Replace definition 3.9 with the following:"

3.9

dynamically self-locking

a gearbox meets the requirements for dynamically self-locking, if the geared motor drive stops immediately or after a short time after switch-off even if a torque is acting at the output side of the gearbox

NOTE Dynamic automatic locking is only possible at very high transmissions ratios and in low drive speed ranges."

7 Modifications to Clause 4

Replace the headline and the existing text with the following:"

4 List of significant hazards

The significant hazards, hazardous situations and events, as far as they are dealt with in this document, identified by a risk assessment as significant for the machines conforming to this standard and which require action to eliminate or reduce the risk, are listed in Clause 5, Table 1, together with the appropriate safety measures."

8 Modification to 5.1.1

Replace the existing text in 5.1.1 with the following:

"Machines conforming to this standard shall comply with the safety requirements and/or protective measures formulated in Table 1 in relation with the different significant hazards. In addition, the machines shall be designed according to the principles of EN ISO 12100-2 for relevant but not significant hazards which are not dealt with by this document.

For application of type B standards such as EN ISO 13857, EN 349, EN 982, EN 983, EN 1037, EN 60204-1, EN ISO 13850, EN ISO 14122-1, EN ISO 14122-2, EN ISO 14122-3, EN ISO 14122-4, the manufacturer shall carry out an adequate risk assessment for the requirements thereof where choice is necessary (as far as the choice is not made in the requirements of this clause)."

9 Modification to 5.1.5

Replace the existing text in 5.1.5 with the following:

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"If access to a danger zone is required for any reason during normal operation, commissioning, setting up, production, maintenance, decommissioning (see 5.2.3 of EN ISO 12100-2:2003), the parts of the control system related to the guarding or safety devices for ensuring safety during access, shall present at least a performance level PL = d while using a category 3 architecture as defined in EN ISO 13849-1:2008, except for hydraulic equipment for which the performance level PL = c while using a category 1 architecture."

10 Modification to 5.1.7

Replace the existing text in 5.1.7 with the following:

"The following Table 1 is developed to allow the designer and manufacturer of the equipment to apply a logical approach for checking the design against the list of significant hazards with respect to abrasive blasting equipment.

Table 1 is structured as follows:

- column 1 identifies the significant hazards;
- column 2 describes the hazardous situations;
- column 3 specifies the safety requirements and/or measures to avoid or minimize the hazards and hazardous situations. They shall be provided in a cumulative manner if not otherwise stated;

NOTE When implementing safety requirements and/or measures it should be considered that different hazards may appear at the same time.

- column 4 identifies the verification method to be used to demonstrate conformity; the abbreviations V, F, M and D are defined as follows:

V: Visual inspection verifies the required features of the components.

F: A test/check verifies that the features provided perform their function in such a way that the requirement is met.

M: Measurement verifies that requirements are met, to the specified limits.

D: Drawings and/or calculations verify that the design characteristics of the components provided meet the requirements.

Verification may involve more than one method."

11 Modification to Table 1 of Clause 5

Replace the headline of Table 1 with the following:

"Table 1 — Significant hazards, hazardous situations, Safety requirements and/or measures"

Replace the headline of column 1 "Hazards" with the following:

"Significant Hazards"