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Varnost lesnoobdelovalnih strojev - Krožne žage - 12. del: Nihalni čelilnik

Safety of woodworking machines - Circular sawing machines - Part 12: Pendulum cross-cut sawing machines

Sicherheit von Holzbearbeitungsmaschinen - Kreissägemaschinen - Teil 12: Pendelkreissägemaschinen

Sécurité des machines pour le travail du bois - Machines à scier circulaires - Partie 12: Tronçonneuses pendulaires

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Safety of woodworking machines - Circular sawing machines - Part 12: Pendulum cross-cut sawing machines

Sécurité des machines pour le travail du bois - Machines à
scier circulaires - Partie 12: Tronçonneuses pendulaires

Sicherheit von Holzbearbeitungsmaschinen -
Kreissägemaschinen - Teil 12: Pendelkreissägemaschinen

This draft amendment is submitted to CEN members for unique acceptance procedure. It has been drawn up by the Technical Committee CEN/TC 142.

This draft amendment A1, if approved, will modify the European Standard EN 1870-12:2003. 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 1870-12:2003/prA1:2009) has been prepared by Technical Committee CEN/TC 142 "Woodworking machines - Safety", the secretariat of which is held by UNI.

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 the Machinery Directive.

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

EN 1870-12:2003/prA1:2009 (E)**1 Modification to the Foreword**

Replace the fourth paragraph with the following:

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

In the 6th paragraph replace "annexes A and C" with "Annexes A, ZA and ZB".

2 Modification to Clause 1, Scope

Replace the first paragraph with: "This document deals with the significant hazards, hazardous situations and events as listed in Clause 4 which are relevant to pendulum cross-cut sawing, herein after referred to as 'machines', designed to cut solid wood, chipboard, fibreboard, plywood and also these materials when covered with plastic edging and/or plastic/light alloy laminates."

Delete the third paragraph.

3 Modification to Clause 2, Normative references

Replace the standard paragraph with the following: "The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies."

Delete reference EN 292-1:1991 in Clause 2 and replace "EN 292-1:1991" with "EN ISO 12100-1:2003" throughout the document.

Delete references EN 292-2:1991 and EN 292/A1:1995.

Delete reference EN 294:1992 and replace it with "EN ISO 13857:2008, Safety of machinery - Safety distances to prevent hazard zones being reached by upper and lower limbs (ISO 13857:2008)". Replace "EN 294:1992" with "EN ISO 13857:2008" throughout the document.

Delete reference to EN 418:1992 and replace it with "EN ISO 13850, Safety of machinery — Emergency stop — Principles for design (ISO 13850:2006)" and replace "EN 418:1992" in 5.1.5, 1st paragraph, with "EN ISO 13850".

Replace "EN 847-1:1997" with "EN 847-1:2005" throughout the document and in the title replace "and" between "tools" and "circular" with a comma.

Delete reference EN 954-1:1996 and replace it with "EN ISO 13849-1:2008, Safety of machinery - Safety-related parts of control systems - Part 1: General principles for design (ISO 13849-1:2006)". Replace "EN 954-1:1996" with "EN ISO 13849-1:2008" throughout the document.

Delete reference to "EN 1070:1998" and replace it with "EN ISO 12100-1:2003" throughout the document.

Replace "EN 60204-1:1992" with "EN 60204-1:2006" and replace in the title "(IEC 60204-1:1992, modified)" with "(IEC 60204-1:2005, modified)".

Replace reference to "EN 60825-1:1994+ A11:1996 + A2:2001" with "EN 60825-1:2007, Safety of laser products — Part 1: Equipment classification and requirements (IEC 60825-1:2007)".

Replace reference to "EN 60947-4-1:1992" with "EN 60947-4-1:2001, Low-voltage switchgear and controlgear — Part 4-1: Contactors and motor-starters — Electromechanical contactors and motor-starters (IEC 60947-4-1:2000)" and replace "EN 60947-4-1:1992" with "EN 60947-4-1:2001" throughout the document.

Replace reference to "EN 60947-5-1:1997" with "EN 60947-5-1:2004, Low voltage switchgear and control gear — Part 5-1: Control circuit devices and switching elements — Electromechanical control circuit devices (IEC 60947-5-1:2003)" and replace "EN 60947-5-1:1997" with "EN 60947-5-1:2004" throughout the document.

Replace "prEN 61496-2:1997" with "CLC/TS 61496-2:2006" in Clause 2 and "prEN 61496-2:1997" with "CLC/TS 61496-2:2006" throughout the document and the 3^d element of the title with "Part 2: Particular requirements for equipment using active opto-electronic protective devices (AOPDs) (IEC 61496-2:2006)".

Replace reference to "ISO 3745:1997" with "EN ISO 3745:2003, Acoustics — Determination of sound power levels of noise sources using sound pressure — Precision methods for anechoic and semi-anechoic rooms (ISO 3745:2003)" and replace "ISO 3745:1997" with "EN ISO 3745:2003" throughout the document.

Replace reference to "HD 21.1 S3:1997" with "HD 21.1 S4:2002, Cables of rated voltages up to and including 450/750 V and having thermoplastic insulation — Part 1: General requirements" and replace "HD 21.1 S3:1997" with "HD 21.1 S4:2002" throughout the document.

Replace reference to "HD 22.1 S3:1997" with "HD 22.1 S4:2002, Cables of rated voltages up to and including 450/750 V and having cross-linked insulation — Part 1: General requirements" and replace "HD 22.1 S3:1997" with "HD 22.1 S4:2002" throughout the document.

Replace reference to "HD 22.4 S3:1995+ A1:1999" with "HD 22.4 S4:2004, Cables of rated voltages up to and including 450/750 V and having crosslinked insulation — Part 4: Cords and flexible cables" and replace "HD 22.4 S3:1995+ A1:1999" with "HD 22.4 S4:2004" throughout the document.

Add the following references:

"EN 894-1:1997, Safety of machinery — Ergonomics requirements for the design of displays and control actuators — Part 1: General principles for human interactions with displays and control actuators

EN 894-2:1997, Safety of machinery — Ergonomics requirements for the design of displays and control actuators — Part 2: Displays

EN 894-3:2000, Safety of machinery — Ergonomics requirements for the design of displays and control actuators — Part 3: Control actuators",

"EN 1005-1:2001, Safety of machinery — Human physical performance — Part 1: Terms and definitions

EN 1005-2:2003, Safety of machinery — Human physical performance — Part 2: Manual handling of machinery and component parts of machinery

EN 1005-3:2002, Safety of machinery — Human physical performance — Part 3: Recommended force limits for machinery operation

EN 1005-4:2005, Safety of machinery — Human physical performance — Part 4: Evaluation of working postures and movements in relation to machinery"

"EN 50370-1:2005, Electromagnetic compatibility (EMC) — Product family standard for machine-tools — Part 1: Emission

EN 50370-2:2003, Electromagnetic compatibility (EMC) — Product family standard for machine-tools — Part 2: Immunity",

"EN 60439-1:1999, Low-voltage switchgear and controlgear assemblies — Part 1: Type-tested and partially type-tested assemblies (IEC 60439-1:1999)",

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"EN 61310-1:2008, *Safety of machinery - Indication, marking and actuation - Part 1: Requirements for visual, acoustic and tactile signals (IEC 61310-1:2007)*"

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

4 Modification to Clause 3, Terms and definitions

Definition 3.7, replace the term with "displaceable machine".

Definition 3.19, replace the term with "information from the supplier".

5 Modification to Clause 4, List of hazards

Replace the title of Clause 4 with: "List of significant hazards".

Replace the clause content with:

"This clause contains the significant hazards, hazardous situations and events (see EN 1050:1996) as far as they are dealt with in this document, identified by risk assessment as significant for the machines as defined in the scope and which require action to eliminate or reduce the risk. This document deals with these significant hazards by defining safety requirements and/or measures or by reference to relevant standards.

These hazards are listed in Table 1 in accordance with Annex A of EN 1050:1996.

Table 1 — List of significant hazards

No	Hazards, hazardous situations and hazardous events	EN ISO 12100		Relevant sub-clause of this document
		Part 1: 2003	Part 2: 2003	
1	Mechanical hazards related to:			
	- machine parts or workpieces:			
	a) shape;	4.2	4.2.1, 4.2.2, 5	5.2.3, 5.2.6, 5.2.7, 5.2.8
	b) relative location;			5.1.2, 5.1.3, 5.1.5, 5.3.5
	c) mass and stability (potential energy of elements which may move under the effect of gravity)			5.3.1
	d) mass and velocity (kinetic energy of elements in controlled or uncontrolled motion);			5.2.7.6
e) mechanical strength.			5.2.2	
	- accumulation of energy inside the machinery:			

	f) elastic elements (springs);	4.2	4.10, 5.5.4	5.2.7.6
	g) liquids and gases under pressure;	4.2	4.10, 5.5.4	5.3.6, 5.3.7
1.1	Crushing hazard	4.2.1		5.2.7, 5.2.8
1.2	Shearing hazard			5.2.7, 5.2.8
1.3	Cutting or severing hazard			5.2.2, 5.2.3, 5.2.4, 5.2.7
1.4	Entanglement hazard			5.2.7
1.5	Drawing-in or trapping hazard			5.2.7
1.6	Impact hazard			5.2.7.4
1.8	Friction or abrasion hazard			5.2.4
1.9	High pressure fluid injection or ejection hazard			5.2.4, 5.3.6, 5.3.7
2	Electrical hazards due to:			
2.1	Contact of persons with live parts (direct contact)	4.3	4.9, 5.5.4	5.3.4, 5.3.12, 5.3.13
2.2	Contact of persons with parts which have become live under faulty conditions (indirect contact)	4.3	4.9	5.3.4, 5.3.12, 5.3.13
2.4	Electrostatic phenomena	4.3	4.9	5.3.10
4	Hazards generated by noise , resulting in:			
4.1	Hearing loss (deafness), other physiological disorders (loss of balance, loss of awareness)	4.5	4.2.2, 5	5.3.2
4.2	Interference with speech communication, acoustic signals.			5.3.2
6	Hazards generated by radiation			
6.5	Lasers	4.7		5.3.9
7	Hazards generated by materials and substances (and their constituent elements) processed or used by the machinery			
7.1	Hazards from contact with or inhalation of harmful fluids and dusts	4.8	4.3b, 4.4	5.3.3, 6.3
7.2	Fire hazard	4.8	4.4	5.3.1, 5.3.3
8	Hazards generated by neglecting ergonomic principles in machinery design related to:			
8.1	Unhealthy postures or excessive effort	4.9	4.7, 4.8.2, 4.11.12, 5.5.5, 5.5.6	5.1.2, 5.3.5, 6.3
8.2	Hand-arm or foot-leg anatomy	4.9	4.8.3	5.1.2, 5.3.5, 6.3
8.4	Local lighting		4.8.6	6.3
8.6	Human error, human behaviour		4.8, 4.11.8, 4.11.10, 5.5.2, 6	6.3
8.7	Design, location or identification of manual controls		4.8.7, 4.11.8	5.1.2
8.8	Design or location of visual display units		4.8.8, 6.2	5.1.2
9	Combination of hazards		4.11	5.1.6, 5.1.7, 5.1.8, 5.2.7.4, 5.3.3, 5.3.4
10	Unexpected start up, unexpected overrun/overspeed (or any similar malfunction) from:			
10.1	Failure/disorder of the control system		4.11, 5.5.4	5.1.8, 5.1.9, 5.2.3.1