



SLOVENSKI STANDARD

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Nadomešča:

SIST EN 1870-7:2002+A1:2009

Varnost lesnoobdelovalnih strojev - Krožne žage - 7. del: Enolistne krožne žage za razrez hlodov z vgrajeno podajalno mizo in ročnim podajanjem in/ali odvzemom

Safety of woodworking machines - Circular sawing machines - Part 7: Single blade log sawing machines with integrated feed table and manual loading and/or unloading

Sicherheit von Holzbearbeitungsmaschinen - Kreissägemaschinen - Teil 7: Einblatt-Stammkreissägemaschinen mit mechanischem Tischvorschub und Handbechickung und/oder Handentnahme

Sécurité des machines pour le travail du bois - Machines à scie circulaire - Partie 7: Scies circulaires mono-lame à grumes à avance intégrée à table et à chargement et/ou déchargement manuel

Ta slovenski standard je istoveten z: EN 1870-7:2012

ICS:

25.080.60	Strojne žage	Sawing machines
79.120.10	Lesnoobdelovalni stroji	Woodworking machines

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EUROPEAN STANDARD

EN 1870-7

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October 2012

ICS 79.120.10

Supersedes EN 1870-7:2002+A1:2009

English Version

Safety of woodworking machines - Circular sawing machines - Part 7: Single blade log sawing machines with integrated feed table and manual loading and/or unloading

Sécurité des machines pour le travail du bois - Machines à
scie circulaire - Partie 7: Scies circulaires mono-lame à
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Sicherheit von Holzbearbeitungsmaschinen -
Kreissägemaschinen - Teil 7: Einblatt-
Stammkreissägemaschinen mit mechanischem
Tischvorschub und Handbechickung und/oder
Handentnahme

This European Standard was approved by CEN on 4 August 2012.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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EN 1870-7:2012 (E)**Foreword**

This document (EN 1870-7:2012) has been prepared by Technical Committee CEN/TC 142 "Woodworking machines - Safety", the secretariat of which is held by UNI.

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 1870-7:2002+A1:2009.

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 Machinery Directive.

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

The main technical modification to the 2009 version relates to the introduction of performance levels (PL).

Organisations contributing to the preparation of this document include European Committee of Woodworking Machinery Manufacturers Association "EUMABOIS" (standards.iteh.ai)

EN 1870, *Safety of woodworking machines — Circular sawing machines*, consists of the following parts:

- *Part 1: Circular saw benches (with and without sliding table), dimension saws and building site saws;*
- *Part 3: Down cutting cross-cut saws and dual purpose down cutting cross-cut saws/circular saw benches;*
- *Part 4: Multiblade rip sawing machines with manual loading and/or unloading;*
- *Part 5: Circular sawbenches/up-cutting cross-cut sawing machines;*
- *Part 6: Circular sawing machines for firewood and dual purpose circular sawing machines for firewood/circular saw benches, with manual loading and/or unloading;*
- *Part 7: Single blade log sawing machines with integrated feed table and manual loading and/or unloading;*
- *Part 8: Single blade edging circular rip sawing machines with power driven saw unit and manual loading and/or unloading;*
- *Part 9: Double blade circular sawing machines for cross-cutting with integrated feed and with manual loading and/or unloading;*
- *Part 10: Single blade automatic and semi-automatic up-cutting cross-cut sawing machines;*
- *Part 11: Semi-automatic and automatic horizontal cross-cut sawing machines with one saw unit (radial arm saws);*
- *Part 12: Pendulum cross-cut sawing machines;*
- *Part 13: Horizontal beam panel sawing machines;*

- *Part 14: Vertical panel sawing machines;*
- *Part 15: Multi-blade cross-cut sawing machines with integrated feed of the workpiece and manual loading and/or unloading;*
- *Part 16: Double mitre sawing machines for V-cutting;*
- *Part 17: Manual horizontal cutting cross-cut sawing machines with one saw unit (radial arm saws);*
- *Part 18: Dimension saws (at Enquiry stage at the time of publication of the present document);*
- *Part 19: Circular saw benches (with and without sliding table) and building site saws (at Enquiry stage at the time of publication of the present document).*

The European Standards produced by CEN/TC 142 are particular to woodworking machines and complement the relevant A and B standards on the subject of general safety (see Introduction of EN ISO 12100:2010 for a description of A, B and C standards).

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.

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EN 1870-7:2012 (E)**Introduction**

This document has been prepared to be a harmonised standard to provide one means of conforming to the essential safety requirements of the Machinery Directive, and associated EFTA regulations. This document is a type C standard as defined in EN ISO 12100:2010.

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

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 other standards, for machines that have been designed and built in accordance with the requirements of the provisions of this type C standard.

The requirements of this document concern manufacturers, suppliers and importers of single blade circular log saw machines with integrated feed and manual loading and/or unloading. It is also useful for designers.

This document also includes information to be provided by the manufacturer to the user.

Common requirements for tooling are given in EN 847-1:2005+A1:2007.

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1 Scope

This European Standard deals with all significant hazards, hazardous situations and events as listed in Clause 4 which are relevant to single blade circular log sawing machines with saw blade diameter ≥ 600 mm and with integrated feed table with manual loading and/or unloading, (hereinafter referred to as machines), designed to cut solid wood when they are used as intended and under the conditions foreseen by the manufacturer including reasonably foreseeable misuse.

This European Standard is not applicable to machines manufactured before the date of its publication as EN.

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.

EN 614-1:2006+A1:2009, *Safety of machinery — Ergonomic design principles — Part 1: Terminology and general principles*

EN 614-2:2000+A1:2008, *Safety of machinery — Ergonomic design principles — Part 2: Interactions between the design of machinery and work tasks*

EN 847-1:2005+A1:2007, *Tools for woodworking — Safety requirements — Part 1: Milling tools, circular saw blades*

EN 894-1:1997+A1:2008, *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+A1:2008, *Safety of machinery — Ergonomics requirements for the design of displays and control actuators — Part 2: Displays*

EN 894-3:2000+A1:2008, *Safety of machinery — Ergonomics requirements for the design of displays and control actuators — Part 3: Control actuators*

EN 1005-1:2001+A1:2008, *Safety of machinery — Human physical performance — Part 1: Terms and definitions*

EN 1005-2:2003+A1:2008, *Safety of machinery — Human physical performance — Part 2: Manual handling of machinery and component parts of machinery*

EN 1005-3:2002+A1:2008, *Safety of machinery — Human physical performance — Part 3: Recommended force limits for machinery operation*

EN 1005-4:2005+A1:2008, *Safety of machinery — Human physical performance — Part 4: Evaluation of working postures and movements in relation to machinery*

EN 1037:1995+A1:2008, *Safety of machinery — Prevention of unexpected start-up*

EN 1088:1995+A2:2008, *Safety of machinery — Interlocking devices associated with guards — Principles for design and selection*

EN 1837:1999+A1:2009, *Safety of machinery — Integral lighting of machines*

EN 12779:2004+A1:2009, *Safety of woodworking machines — Chip and dust extraction systems with fixed installation — Safety related performances and safety requirements*

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

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

EN 60529:1991,²⁾ *Degrees of protection provided by enclosures (IP Code) (IEC 60529:1989)*

EN 60825-1:2007, *Safety of laser products — Part 1: Equipment classification and requirements (IEC 60825-1:2007)*

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 61800-5-2:2007, *Adjustable speed electrical power drive systems — Part 5-2: Safety requirements — Functional (IEC 61800-5-2:2007)*

EN ISO 3743-1:2010, *Acoustics — Determination of sound power levels and sound energy levels of noise sources using sound pressure — Engineering methods for small movable sources in reverberant fields — Part 1: Comparison method for a hard-walled test room (ISO 3743-1:2010)*

EN ISO 3743-2:2009, *Acoustics — Determination of sound power levels of noise sources using sound pressure — Engineering methods for small, movable sources in reverberant fields — Part 2: Methods for special reverberation test rooms (ISO 3743-2:1994)*

EN ISO 3744:2010, *Acoustics — Determination of sound power levels and sound energy levels of noise sources using sound pressure — Engineering method in an essentially free field over a reflecting plane (ISO 3744:2010)*

EN ISO 3745:2009,³⁾ *Acoustics — Determination of sound power levels of noise sources using sound pressure — Precision methods for anechoic and semi-anechoic rooms (ISO 3745:2003)*

EN ISO 3746:2010, *Acoustics — Determination of sound power levels and sound energy levels of noise sources using sound pressure — Survey method using an enveloping measurement surface over a reflecting plane (ISO 3746:2010)*

EN ISO 4413:2010, *Hydraulic fluid power — General rules and safety requirements for systems and their components (ISO 4413:2010)*

EN ISO 4414:2010, *Pneumatic fluid power — General rules and safety requirements for systems and their components (ISO 4414:2010)*

EN ISO 4871:2009, *Acoustics — Declaration and verification of noise emission values of machinery and equipment (ISO 4871:1996)*

EN ISO 9614-1:2009, *Acoustics — Determination of sound power levels of noise sources using sound intensity — Part 1: Measurement at discrete points (ISO 9614-1:1993)*

1) EN 60439-1:1999 is impacted by EN 60439-1:1999/A1:2004.

2) EN 60529:1991 is impacted by EN 60529:1991/A1:2000.

3) EN ISO 3745:2009 is superseded by EN ISO 3745:2012.

EN ISO 11202:2010, *Acoustics — Noise emitted by machinery and equipment — Determination of emission sound pressure levels at a work station and at other specified positions applying approximate environmental corrections (ISO 11202:2010)*

EN ISO 11204:2010, *Acoustics — Noise emitted by machinery and equipment — Determination of emission sound pressure levels at a work station and at other specified positions applying accurate environmental corrections (ISO 11204:2010)*

EN ISO 11688-1:2009, *Acoustics — Recommended practice for the design of low-noise machinery and equipment — Part 1: Planning (ISO/TR 11688-1:1995)*

EN ISO 12100:2010, *Safety of machinery — General principles for design — Risk assessment and risk reduction (ISO 12100:2010)*

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 13850:2008, *Safety of machinery — Emergency stop — Principles for design (ISO 13850:2006)*

ISO 7960:1995, *Airborne noise emitted by machine tools — Operating conditions for woodworking machines*

HD 22.4 S4:2004,⁴⁾ *Cables of rated voltages up to and including 450/750 V and having cross-linked insulation — Part 4: Cords and flexible cables*

3 Terms and definitions

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3.1 General

For the purposes of this document, the terms and definitions given in EN ISO 12100:2010 and the following apply.

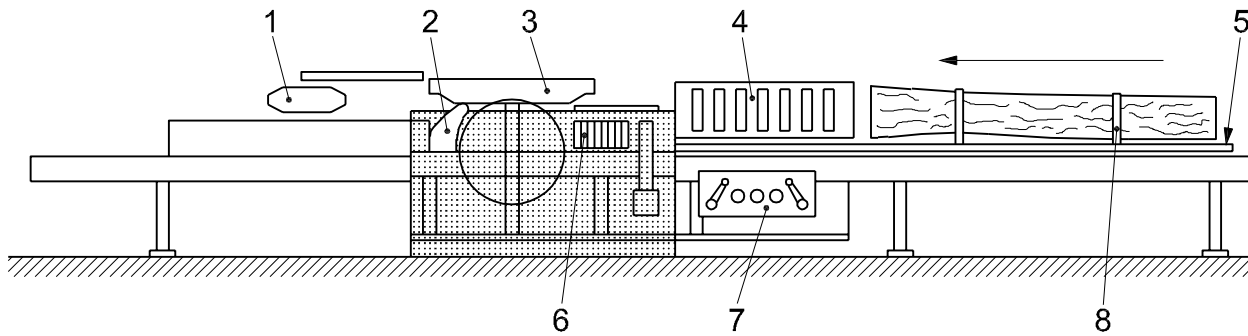
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3.2 Terms

The main parts of the machine and their terminology are illustrated in Figure 1.

4) HD 22.4 S4:2004 is superseded by EN 50525-2-21:2011.

EN 1870-7:2012 (E)

**Key**

- 1 dropping device
- 2 riving knife
- 3 holding-down device
- 4 fence
- 5 feed table
- 6 feed rollers
- 7 controls
- 8 log hook

Figure 1 — Terminology

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3.3 Definitions**3.3.1**

single blade circular log sawing machine with integrated feed table and manual loading and/or unloading

machine designed for the ripping of solid wood e.g. logs, having the following characteristics:

- a) integrated feed table;
- b) saw blade diameter ≥ 600 mm;
- c) the saw blade is mounted on a horizontal spindle below the table;
- d) the saw blade spindle is in a fixed position

3.3.2**stationary machine**

machine designed to be located on or fixed to the floor or other parts of the structure of the premises and to be stationary during use

3.3.3**displaceable machine**

machine which is located on the floor, stationary during use and equipped with a device, normally wheels, which allow it to be moved between locations

3.3.4**machine actuator**

power mechanism used to effect motion of the machine

3.3.5**integrated feed**

feed mechanism for the workpiece (or tool) which is integrated with the machine and where the workpiece (or machine element with incorporated tool) is (are) held and controlled mechanically during the machining operation

Note 1 to entry: The words in brackets are not applicable to the machines covered by this document.

3.3.6**anti kickback device**

device which either reduces the possibility of kickback or arrests the motion during kickback of the workpiece or parts of it or parts of the machine

3.3.7**ejection**

unexpected movement of the workpiece or parts of it or part of the machine from the machine during processing

3.3.8**kickback**

particular form of ejection and is describing the unexpected movement of the workpiece or parts of it or parts of the machine opposite to the direction of feed during processing

3.3.9**run-up time**

time elapsed from the actuation of the start control device until the spindle reaches the intended speed

3.3.10**run-down time**

time elapsed from the actuation of the stop control device up to spindle standstill

3.3.11**dropping device**

device designed to remove the workpiece or off-cuts from the integrated feed table

Note 1 to entry: See Figure 2.

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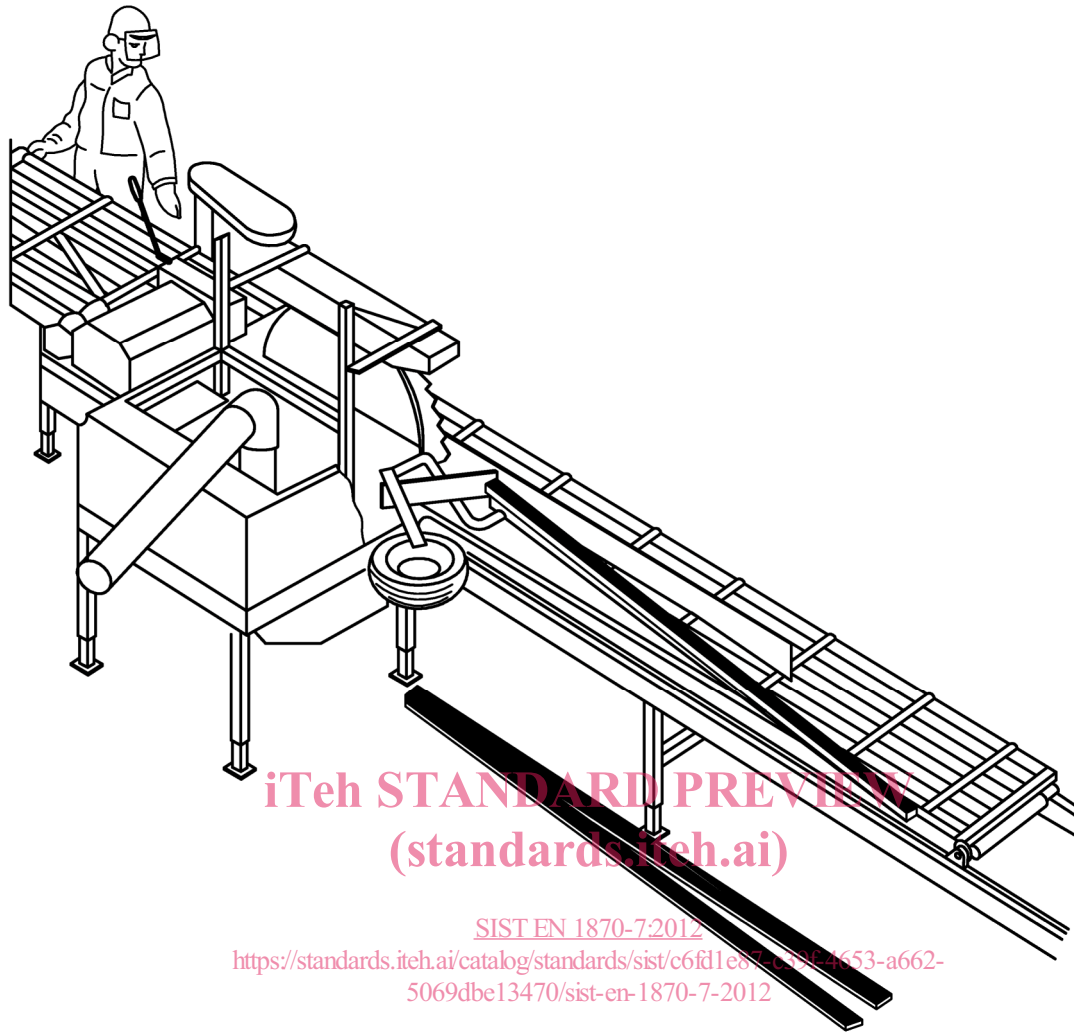


Figure 2 — Example of dropping device (guards not shown)

3.3.12
log lifter

equipment, integral with the machine and which lifts the log from the ground onto the integrated feed table

Note 1 to entry: See Figure 3.

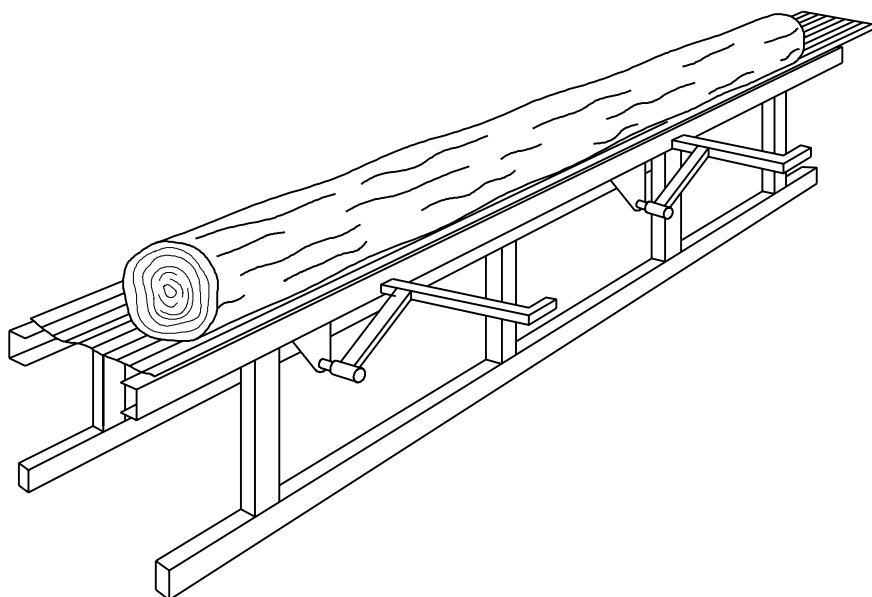


Figure 3 — Example of log lifter

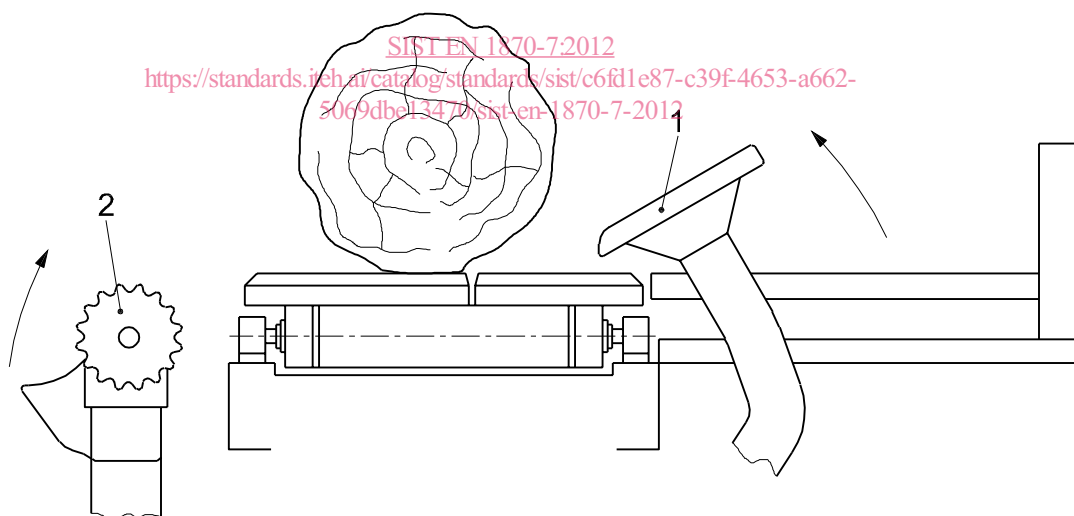
3.3.13

log positioner

device for horizontal (adjusting) and rotational positioning of the log/workpiece prior to sawing

Note 1 to entry: See Figure 4.

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Key

- 1 log adjuster
- 2 log rotator

Figure 4 — Example of log adjuster and rotator

3.3.14

log delivery device

device for loading the log onto the integrated feed table

Note 1 to entry: See Figure 5.