
Varnost strojev - Varnostne zahteve za načrtovanje in konstrukcijo strojev in opreme za izdelavo papirja - 8. del: Naprave za mletje

Safety of machinery - Safety requirements for the design and construction of paper making and finishing machines - Part 8: Refining plants

Sicherheit von Maschinen - Sicherheitsanforderungen an Konstruktion und Bau von Maschinen der Papierherstellung und Ausrüstung - Teil 8: Mahlanlagen

Sécurité de machines - Exigences techniques de sécurité pour la conception et la construction de machines de fabrication et de finition du papier - Partie 8: Usines de raffinage

<https://standards.iteh.ai/catalog/standards/sist/5129e502-5d9a-4ccd-a994-5e3f23771c97/sist-en-1034-8-2012>

Ta slovenski standard je istoveten z: EN 1034-8:2012

ICS:

13.110	Varnost strojev	Safety of machinery
21.020	Značilnosti in načrtovanje strojev, aparatov, opreme	Characteristics and design of machines, apparatus, equipment
85.100	Oprema za papirno industrijo	Equipment for the paper industry

SIST EN 1034-8:2012**en,fr**

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 1034-8:2012](#)

<https://standards.iteh.ai/catalog/standards/sist/5129e502-5d9a-4ccd-a994-5e3f23771c97/sist-en-1034-8-2012>

EUROPEAN STANDARD

EN 1034-8

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2012

ICS 85.100

English Version

Safety of machinery - Safety requirements for the design and construction of paper making and finishing machines - Part 8: Refining plants

Sécurité des machines - Prescriptions de sécurité pour la conception et la construction de machines de fabrication et de finition du papier - Partie 8: Ateliers de raffinage

Sicherheit von Maschinen - Sicherheitsanforderungen an Konstruktion und Bau von Maschinen der Papierherstellung und Ausrüstung - Teil 8: Mahlanlagen

This European Standard was approved by CEN on 8 January 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.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

Foreword.....	3
Introduction	5
1 Scope	6
2 Normative references	6
3 Terms and definitions	7
4 List of significant hazards	8
5 Safety requirements and/or measures	10
5.1 General.....	10
5.2 Workplaces, means of access, walkways, passageways.....	11
5.3 Emergency stop device.....	11
5.4 Control system and actuators	11
5.5 Power, temperature and pressure control system, forced lubrication system.....	12
5.6 Refining gap adjustment.....	12
5.7 Energy isolation and dissipation, prevention of unexpected start-up.....	12
5.8 Electrical drive systems	12
5.9 Power transmission elements	12
5.10 Stock pumps, gate valves, piping.....	12
5.11 Electrical equipment.....	13
5.12 Hydraulic equipment	13
5.13 Pneumatic equipment	13
5.14 Equipment and measures for cleaning and maintenance	13
5.15 Noise	13
5.16 Hot surfaces	14
5.17 Integrated lighting.....	14
5.18 Ergonomic principles	14
6 Verification of safety requirements and/or measures.....	14
7 Information for use	15
7.1 General information.....	15
7.2 Instruction handbook	15
7.3 Marking	16
Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC	17
Tables	
Table 1 — List of significant hazards	9
Table 2 — Safety Integrity Level und Performance Level.....	11
Table 3 — Methods used to verify safety requirements and/or measures	15

Foreword

This document (EN 1034-8:2012) has been prepared by Technical Committee CEN/TC 198 "Printing and paper machinery - Safety", 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 September 2012, and conflicting national standards shall be withdrawn at the latest by September 2012.

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 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 Annex ZA, which is an integral part of this document.

This European Standard is part 8 of a standard for the technical safety requirements for the design and construction of paper making and finishing machines which consists of the following parts:

Part 1: *Common requirements;*

Part 2: *Barking drums;*

Part 3: *Winders and slitters, plying machines;*

Part 4: *Pulpers and their feeding facilities;*

Part 5: *Sheeters;*

Part 6: *Calanders;*

Part 7: *Chests;*

Part 8: *Refining plants;*

Part 13: *Machines for de-wiring bales and units;*

Part 14: *Reel splitter;*

Part 16: *Paper and board making machines;*

Part 17: *Tissue making machines;*

Part 21: *Coaters;*

Part 22: *Wood grinders;*

Part 26: *Roll packaging machines;*

Part 27: *Roll handling systems.*

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania,

ITeH STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 1034-8:2012

<https://standards.iteh.ai/catalog/standards/sist/5129e502-5d9a-4ccd-a994-5e3f23771c97/sist-en-1034-8-2012>

EN 1034-8:2012 (E)

Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

**iTeh STANDARD PREVIEW
(standards.iteh.ai)**

[SIST EN 1034-8:2012](#)

<https://standards.iteh.ai/catalog/standards/sist/5129e502-5d9a-4ccd-a994-5e3f23771c97/sist-en-1034-8-2012>

Introduction

This document is a type C standard as stated in EN 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. For machines that have been designed and built according to the provisions of this C standard, the following stipulation applies: Where provisions of this type C standard are different from those which are stated in type A or B standards or from provisions made in EN 1034-1:2000+A1:2010 the provisions of this type C standard take precedence over the provisions of the other standards.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN 1034-8:2012](https://standards.iteh.ai/catalog/standards/sist/5129e502-5d9a-4ccd-a994-5e3f23771c97/sist-en-1034-8-2012)

<https://standards.iteh.ai/catalog/standards/sist/5129e502-5d9a-4ccd-a994-5e3f23771c97/sist-en-1034-8-2012>

EN 1034-8:2012 (E)**1 Scope**

This European Standard applies to low consistency refining plants, i.e. plants working with suspensions of fibres of virgin pulp, mechanical wood pulp or deinking pulp in water with a consistency up to approximately 6 %, used in the paper making process and applies together with EN 1034-1:2000+A1:2010. It deals with all significant hazards, hazardous situations and hazard events relevant to refining plants, when used as intended and under the conditions foreseen by the manufacturer (see Clause 4).

This standard does not apply to beaters.

This document is not applicable to machines which are manufactured before the date of publication of this document by CEN.

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 349:1992+A1:2008, *Safety of machinery — Minimum gaps to avoid crushing of parts of the human body*

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: Interaction between the design of machinery and work tasks*

EN 809:1998+A1:2009, *Pumps and pump units for liquids — Common safety requirements*

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

EN 953:1997+A1:2009, *Safety of machinery — Guards — General requirements for the design and construction of fixed and movable guards*

EN 1034-1:2000+A1:2010, *Safety of machinery — Safety requirements for the design and construction of paper making and finishing machines — Part 1: Common requirements*

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

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

EN 13023:2003+A1:2010, *Noise measurement methods for printing, paper converting, paper making machines and auxiliary equipment — Accuracy grades 2 and 3*

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

EN 60204-11:2000, *Safety of machinery — Electrical equipment of machines — Part 11: Requirements for HV equipment for voltages above 1 000 V a.c. or 1 500 V d.c. and not exceeding 36 kV (IEC 60204-11:2000)*

EN 61000-6-2:2005, *Electromagnetic compatibility (EMC) — Part 6-2: Generic standards — Immunity for industrial environments (IEC 61000-6-2:2005)*

EN 61511-1:2004, *Functional safety — Safety instrumented systems for the process industry sector — Part 1: Framework, definitions, system, hardware and software requirements (IEC 61511-1:2003 + Corrigendum 2004)*

EN 61511-2:2004, *Functional safety — Safety instrumented systems for the process industrial sector — Part 2: Guidelines for the application of IEC 61511-1 (IEC 61511-2:2003)*

EN 62061:2005, *Safety of machinery — Functional safety of safety-related electrical, electronic and programmable electronic control systems (IEC 62061:2005)*

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

EN ISO 13732-1:2008, *Ergonomics of the thermal environment - Methods for the assessment of human responses to contact with surfaces - Part 1: Hot surfaces (ISO 13732-1:2006)*

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 13849-2:2008, *Safety of machinery — Safety-related parts of control systems — Part 2: Validation (ISO 13849-2:2003)*

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

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

<https://standards.iteh.ai/catalog/standards/sist/5129e502-5d9a-4ccd-a994-5e3f23771c97/sist-en-1034-8-2012>

3 Terms and definitions

For the purpose of this document, the terms and definitions given in EN 1034-1:2000+A1:2010, EN ISO 12100:2010 and the following apply.

3.1

refining plant

plant consisting of at least one refiner including drive system, control system, stock pump, deflaker (if provided) and piping system