

KRAANAD. UJUWKRAANAD. OSA 1:
ÜLDOOTSTARBEIISED UJUWKRAANAD

Cranes - Offshore cranes - Part 1: General-purpose
offshore cranes

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>See Eesti standard EVS-EN 13852-1:2025 sisaldab Euroopa standardi EN 13852-1:2025 ingliskeelset teksti.</p> <p>Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 30.04.2025.</p> <p>Standard on kättesaadav Eesti Standardimis- ja Akrediteerimiskeskusest.</p>	<p>This Estonian standard EVS-EN 13852-1:2025 consists of the English text of the European standard EN 13852-1:2025.</p> <p>This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.</p> <p>Date of Availability of the European standard is 30.04.2025.</p> <p>The standard is available from the Estonian Centre for Standardisation and Accreditation.</p>
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EUROPEAN STANDARD

EN 13852-1

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English Version

Cranes - Offshore cranes - Part 1: General-purpose offshore cranes

Appareils de levage à charge suspendue - Grues off-shore - Partie 1 : Grues off-shore pour usage général

Krane - Offshore-Krane - Teil 1: Offshore-Krane für allgemeine Verwendung

This European Standard was approved by CEN on 24 February 2025.

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.

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CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Contents

Page

European foreword	9
Introduction	11
1 Scope.....	12
2 Normative references.....	12
3 Terms and definitions	17
4 List of significant hazards	23
5 Safety requirements and/or protective measures	28
5.1 General.....	28
5.1.1 Design.....	28
5.1.2 Exchange of information	28
5.1.3 Offshore marine environment	29
5.1.4 Fitness for purpose.....	29
5.1.5 Power supply	30
5.1.6 Hazardous area.....	30
5.1.7 High risk applications	30
5.1.8 Security of automation and control systems	30
5.1.9 Environmental footprint.....	31
5.1.10 Safety functions	31
5.2 Strength, stability and fatigue	33
5.2.1 General principles and requirements	33
5.2.2 Service classification	33
5.2.3 Loads and load combinations.....	34
5.2.4 Limit states and proof of competence	35
5.2.5 Failure mode analysis	37
5.2.6 Load charts.....	37
5.2.7 Material selection	38
5.3 Control system	39
5.3.1 General.....	39
5.3.2 Start and stop functions.....	39
5.3.3 Prevention of unexpected start-up.....	39
5.3.4 Lifting mode selector	39
5.3.5 Main motion controls	40
5.3.6 Inadvertent use.....	40
5.3.7 Remote console (optional)	41
5.3.8 Minimum hook velocities.....	41
5.3.9 Response time	41
5.3.10 Control instrumentation	41
5.3.11 Location of consoles.....	41
5.3.12 Motion compensation.....	42
5.3.13 Crane assistant functions.....	42
5.4 Electrical equipment.....	42
5.4.1 General.....	42
5.4.2 Isolation of incoming supplies	42
5.4.3 Slipping units	43
5.4.4 Enclosures	43

5.4.5	Ingress protection	43
5.4.6	Cables	43
5.4.7	Protective earthing	43
5.4.8	Protection against electric shock by indirect contact	44
5.4.9	Protection against electric shock by direct contact	44
5.4.10	Hazardous areas	44
5.4.11	Electromagnetic compatibility	44
5.4.12	Variable frequency drives (VFD)	44
5.4.13	Brake resistors	44
5.4.14	Electrical motors	44
5.4.15	Batteries	44
5.5	Mechanical equipment	44
5.5.1	General	44
5.5.2	Hoist and luffing wire rope drives	45
5.5.3	Folding and cylinder luffing drives	45
5.5.4	Slewing drives	45
5.5.5	Travelling drives	45
5.5.6	Telescopic drives	46
5.5.7	Bearings	46
5.5.8	Couplings, splines and gears	46
5.5.9	Brakes	46
5.5.10	Drums for wire ropes	47
5.5.11	Wire ropes	47
5.5.12	Wire rope terminations	47
5.5.13	Wire rope sheaves	48
5.5.14	Wear protectors	48
5.5.15	Fixed load lifting attachments	48
5.5.16	Bolt assemblies	49
5.5.17	Double means of securing	49
5.6	Fluid power systems	49
5.6.1	General	49
5.6.2	Hydraulic systems	50
5.6.3	Hydraulic reservoirs	50
5.6.4	Hydraulic cylinders	50
5.6.5	Load holding devices	50
5.6.6	Accumulators	51
5.6.7	Hoses, tubes and fittings	51
5.6.8	Pneumatic systems	51
5.7	Safeguarding	51
5.7.1	General	51
5.7.2	External acoustic warning device	51
5.7.3	Control system indicator	52
5.7.4	Wind indicator	52
5.7.5	Hook motion indicator	52
5.7.6	Rated capacity indicator (RCI)	52
5.7.7	Motion limiters	52
5.7.8	Rated capacity limiter (RCL)	53
5.7.9	Slack wire rope limiter	53
5.7.10	Mechanical limiters	54
5.7.11	Motion detection system (MDS)	54
5.7.12	Automatic Overload Protection System (AOPS)	54
5.7.13	Manual Overload Protection System (MOPS)	57
5.7.14	Emergency operation system (EOS)	58

5.7.15	Emergency stop	60
5.7.16	Fire prevention and fire protection	60
5.8	Installation interface	61
5.8.1	General.....	61
5.8.2	Pedestal adaptor	61
5.8.3	External lighting.....	61
5.8.4	Power and communications	62
5.8.5	Ignition source control	62
5.8.6	Emergency shut down (ESD).....	62
5.9	User interface	62
5.9.1	General.....	62
5.9.2	Ergonomics.....	62
5.9.3	Access and escape	62
5.9.4	Control station	63
5.9.5	Remote console.....	65
5.9.6	Communications	65
5.9.7	Enclosed spaces	66
5.9.8	Lighting.....	66
5.9.9	Noise reduction.....	66
5.9.10	Vibrations	67
5.9.11	Guards.....	67
5.9.12	Edges, angles and surfaces	67
5.9.13	Hot surfaces	67
5.9.14	Hazardous substances.....	68
5.9.15	Arrangements for stowing and maintenance	68
5.9.16	Component and equipment identification.....	68
5.9.17	Dropped objects	69
5.9.18	Warnings.....	69
5.9.19	Data recorder	69
5.9.20	Software access.....	70
5.10	Fabrication	71
5.10.1	General.....	71
5.10.2	Component traceability	71
5.10.3	Quality assurance	72
5.10.4	Material certification.....	72
5.10.5	Welding.....	72
5.10.6	Bolted connections.....	72
5.10.7	Corrosion protection	72
5.11	Lifting of persons	73
5.11.1	General.....	73
5.11.2	Rated capacity	73
5.11.3	Control system	73
5.11.4	Mode selector for lifting of persons	73
5.11.5	Back-up brake	74
5.11.6	Back-up motion limiters.....	74
5.11.7	Hydraulic cylinders.....	74
5.11.8	Reeving systems for luffing	74
5.11.9	Lifting of rescue boats	75
6	Verification of the safety requirements and/or protective measures	76
6.1	General.....	76
6.1.1	Verification.....	76
6.1.2	Documentation	76

6.1.3	Verification methods.....	76
6.2	Testing.....	80
6.2.1	General.....	80
6.2.2	Function test.....	81
6.2.3	Load test.....	81
6.2.4	Load test points.....	81
6.2.5	Test acceptance criteria.....	82
6.2.6	Enhanced verification programme associated with the lifting of persons.....	82
7	Information for use.....	82
7.1	General.....	82
7.1.1	Provisions of an instruction for use.....	82
7.1.2	Installation.....	83
7.1.3	Additional information.....	83
7.2	Operation.....	84
7.2.1	General.....	84
7.2.2	Checks before starting operation.....	85
7.2.3	Checks during operation.....	86
7.2.4	Crane out of service.....	86
7.2.5	Lifting of persons (if part of the intended use).....	86
7.3	Maintenance.....	88
7.3.1	General.....	88
7.3.2	Inspections.....	89
7.3.3	Enhanced inspection and maintenance.....	90
7.4	Marking.....	90
7.4.1	Manufacturer's plate.....	90
7.4.2	Rated capacity information.....	90
7.4.3	Warning signs and pictograms.....	90
7.4.4	Components.....	90
Annex A (informative) Selection of a suitable set of crane standards for a given application.....		91
Annex B (normative) Determination of factors.....		93
B.1	Calculation of the dynamic factors Φ_{2n} by the simplified method.....	93
B.2	Motion response analysis.....	95
B.3	Offlead and sidelead.....	96
B.4	Hook velocity.....	96
B.4.1	Hoisting velocity.....	96
B.4.2	Horizontal hook velocity.....	97
B.5	Load combinations.....	99
Annex C (normative) Environmental influences.....		105
C.1	General.....	105
C.2	Ice and snow loads.....	105
C.3	Temperature.....	106
C.4	Wind.....	106
C.4.1	Wind velocities.....	106
C.5	Installation motions.....	107
C.5.1	Inclination.....	107

C.5.2	Accelerations	107
C.5.3	Mean accelerations	108
	Annex D (normative) Failure mode analysis	109
D.1	General	109
D.2	Failure mode charts	109
	Annex E (normative) Control station information	111
E.1	General	111
E.2	Control station information	111
E.3	Optional control station information	113
	Annex F (normative) Requirements for brakes	114
	Annex G (normative) Safe state	116
G.1	Safe state of the crane	116
G.2	Abnormal events	117
G.3	Ranking of means of safeguarding	118
G.4	Safe state of the installation	118
	Annex H (normative) Safety functions and required performance levels	120
	Annex I (informative) Typical general-purpose offshore cranes and terminology	121
I.1	General	121
	Annex J (normative) Excursion envelopes	125
	Annex K (informative) Installation interface	126
K.1	General	126
K.2	Pedestal	126
K.3	Boom rest	126
K.4	Access and escape	126
K.5	Laydown areas and blind zones	126
K.6	Crane restriction charts	127
K.7	Dropped object protection	127
K.8	Lighting	127
K.9	Power supplies and uninterrupted power supply (UPS)	127
	Annex L (normative) Equipment for use in a hazardous area	128
L.1	General	128
L.2	Avoidance or reduction of ignition sources	128
L.3	Electrical equipment	128
L.4	Non-electrical equipment	129
L.5	Electrostatic discharge	129
	Annex M (informative) Offshore crane data sheet	130

Annex N (informative) Crane assistant functions	136
N.1 General	136
N.2 Levels of automation	136
N.3 Deck motion detection.....	136
N.4 Hook position detection	136
N.5 Lift-off and landing assistant.....	137
N.6 Anti-swing assistant.....	137
N.7 People detection	137
N.8 Handsfree slinging	137
N.9 Collision warning.....	137
N.10 Remote/automated inspection, test and diagnostics.....	137
Annex O (informative) Crane study.....	138
O.1 General	138
O.2 Design basis	138
O.3 Crane elements.....	139
O.4 Risk assessment	140
Annex P (informative) High Risk Applications	141
P.1 General	141
P.1.1 Introduction	141
P.1.2 Risk classes	141
P.1.3 Risk reduction.....	143
P.2 Rated capacity.....	144
P.3 Control system.....	145
P.4 Mode selector for high risk applications.....	145
P.5 Duplicated components.....	145
P.5.1 General	145
P.5.2 Back-up brake.....	146
P.5.3 Slewing system	146
P.5.4 Back-up motion limiters	146
P.5.5 Anti-collision system.....	146
P.5.6 Back-up motion detection sensors.....	146
P.5.7 Hydraulic system	146
P.5.8 Hydraulic cylinders.....	147
P.5.9 Reeving systems.....	147
P.6 Enhanced inspection and maintenance.....	148
P.7 Fabrication.....	148
P.8 Enhanced verification programme	148
P.9 Information for use.....	148
P.10 Risk coefficients	149
Annex Q (informative) Guidance for classification according to EN 13001-1:2015.....	151
Q.1 General	151
Q.2 Total number of working cycles.....	151
Q.3 Load spectrum factor kQ.....	153

Q.4	Classification of the hoist mechanism	154
Q.5	Classification of the luffing mechanism	156
Q.6	Classification of the slewing mechanism.....	157
Q.7	Accelerations per movements.....	160
	Annex R (normative) Noise test code.....	161
R.1	General.....	161
R.2	Sound power level determination	161
R.2.1	Basic standard to be used	161
R.2.2	Measurement and calculation procedure	161
R.3	Emission sound pressure level determination	162
R.3.1	Basic standard to be used	162
R.3.2	Crane operator and microphone positions	162
R.3.3	Specifications concerning the crane operating cabin.....	162
R.3.4	Specification relating to wind speed.....	162
R.3.5	Measurement and calculation procedure.....	162
R.4	Operating conditions	163
R.4.1	General.....	163
R.4.2	Test procedure.....	164
R.4.2.1	General.....	164
R.4.2.2	Idling.....	164
R.4.2.3	Hoisting	164
R.4.2.4	Slewing.....	164
R.4.2.5	Luffing	165
R.4.2.6	Telescoping (if applicable)	165
R.5	Information on measurement uncertainties	165
R.6	Information to be recorded.....	165
R.7	Information to be reported	165
R.8	Declaration and verification of noise emission values	165
R.9	Noise measurement — test report.....	166
	Annex ZA (informative) Relationship between this European Standard and the essential requirements of Directive 2006/42/EC aimed to be covered	170
	Annex ZB (informative) Relationship between this European Standard and the essential Health and Safety Requirements of EU Directive 2014/34/EU aimed to be covered	173
	Bibliography	176

European foreword

This document (EN 13852-1:2025) has been prepared by Technical Committee CEN/TC 147 "Cranes - Safety", the secretariat of which is held by SFS.

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 October 2025, and conflicting national standards shall be withdrawn at the latest by October 2025.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 13852-1:2013.

EN 13852-1:2023 includes the following significant technical changes with respect to EN 13852-1:2013:

- a) adjustment of scope;
- b) update of reference standards;
- c) new clause for exchange of information;
- d) new clause for fitness for purpose;
- e) new clause for high risk applications;
- f) new clause for security of automation and control systems;
- g) new clause for environmental footprint;
- h) new clause for safety functions;
- i) revised requirements for strength, stability and fatigue;
- j) revised requirements for control systems;
- k) revised requirements for electrical equipment;
- l) revised requirements for mechanical equipment;
- m) revised requirements for fluid power systems;
- n) revised requirements for safeguarding;
- o) new requirements and new annex for installation interface;
- p) new requirements for user interfaces;
- q) new requirements for fabrication;
- r) revised requirements for lifting of persons;

- s) revised requirements for verification;
- t) revised requirements for information for use;
- u) new annex for installation interface;
- v) new annex for crane assistant functions;
- w) new annex for crane study;
- x) new annex for high risk applications;
- y) new annex for guidance for classification.

This document has been prepared under a Standardization Request given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s) / Regulation(s).

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

This document is one part of EN 13852. The parts are the following ones:

- Part 1: General-purpose offshore cranes (the present document);
- Part 2: Floating cranes;
- Part 3: Light offshore cranes.

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

Introduction

This document is a type C standard as defined in EN ISO 12100:2010.

This document is of relevance, in particular, for the following stakeholder groups representing the market players with regard to machinery safety:

- machine manufacturers (small, medium and large enterprises);
- health and safety bodies (regulators, accident prevention organizations, market surveillance, etc.).

Others can be affected by the level of machinery safety achieved with the means of the document by the above-mentioned stakeholder groups:

- a) machine users/employers (small, medium and large enterprises);
- b) machine users/employees (e.g. trade unions, organizations for people with special needs);
- c) service providers, e.g. for maintenance (small, medium and large enterprises);
- d) consumers (in case of machinery intended for use by consumers).

This document has been prepared to provide one means for general purpose offshore cranes to conform to the essential health and safety requirements of the Machinery Directive.

The machinery concerned and the extent to which hazards, hazardous situations and hazardous events are covered are indicated in the scope of this document (see Clause 1).

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.

1 Scope

This document applies to general purpose offshore cranes including their supporting pedestals and structures.

This document is applicable to general purpose offshore cranes, whose structures are made of steel.

This document provides requirements for significant hazards, hazardous situations and events relevant to general purpose offshore cranes, for lifting of goods and lifting of persons, when used as intended and under the conditions foreseen by the risk assessment (see Clause 4).

This document is applicable to general purpose offshore cranes, which are manufactured after the date of approval by CEN of this document.

This document is not applicable for:

- a) transportation, assembly, disabling, scrapping, installation or erecting of the crane;
- b) any item attached to the hook, such as loads, non-fixed load lifting attachments, lifting accessories, baskets, carriers and containers;
- c) lifting operations in ambient temperatures below - 20 °C;
- d) lifting operations in ambient temperatures above 45 °C;
- e) accidental loads as a result of collisions, earthquakes, explosions, etc., which are not covered by exceptional loads defined in Table B.7;
- f) floating cranes (covered by EN 13852-2), light offshore cranes (covered by EN 13852-3) and 2D/3D motion compensated cranes;
- g) subsea lifting operations;
- h) lifting operations involving more than one crane;
- i) offshore cranes as part of the emergency preparedness plan for evacuation.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

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 795:2012, *Personal fall protection equipment - Anchor devices*

EN 842:1996+A1:2008, *Safety of machinery - Visual danger signals - General requirements, design and testing*

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 1127-1:2019, *Explosive atmospheres - Explosion prevention and protection - Part 1: Basic concepts and methodology*
- EN 1679-1:1998,¹ *Reciprocating internal combustion engines - Safety - Part 1: Compression ignition engines*
- EN 1837:2020, *Safety of machinery - Integral lighting of machines*
- EN 1838:2024, *Lighting applications - Emergency lighting*
- EN 10204:2004, *Metallic products - Types of inspection documents*
- EN 12077-2:2024, *Cranes safety - Requirements for health and safety - Part 2: Limiting and indicating devices*
- EN 12385-1:2002+A1:2008, *Steel wire ropes - Safety - Part 1: General requirements*
- EN 12385-2:2002+A1:2008, *Steel wire ropes - Safety - Part 2: Definitions, designation and classification*
- EN 12385-3:2020, *Steel wire ropes - Safety - Part 3: Information for use and maintenance*
- EN 12385-4:2002+A1:2008, *Steel wire ropes - Safety - Part 4: Stranded ropes for general lifting applications*
- EN 12644-1:2001+A1:2008, *Cranes - Information for use and testing - Part 1: Instructions*
- EN 12644-2:2000+A1:2008, *Cranes - Information for use and testing - Part 2: Marking*
- EN 13001-1:2015, *Cranes - General design - Part 1: General principles and requirements*
- EN 13001-2:2021, *Crane safety - General design - Part 2: Load actions*
- EN 13001-3-1:2012+A2:2018, *Cranes - General Design - Part 3-1: Limit States and proof competence of steel structure*
- EN 13001-3-2:2014, *Cranes - General design - Part 3-2: Limit states and proof of competence of wire ropes in reeving systems*
- EN 13001-3-3:2014, *Cranes - General design - Part 3-3: Limit states and proof of competence of wheel/rail contacts*
- EN 13001-3-4:2018, *Cranes - General design - Part 3-4: Limit states and proof of competence of machinery - Bearings*

¹ As impacted by EN 1679-1:1998+A1:2011.

EN 13001-3-5:2016+A1:2021, *Cranes - General design - Part 3-5: Limit states and proof of competence of forged and cast hooks*

EN 13001-3-6:2018+A1:2021, *Cranes - General design - Part 3-6: Limit states and proof of competence of machinery - Hydraulic cylinders*

EN 13135:2013+A1:2018, *Cranes - Safety - Design - Requirements for equipment*

EN 13557:2024, *Cranes - Controls and control stations*

EN 13586:2020, *Cranes - Access*

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 14118:2018, *Safety of machinery - Prevention of unexpected start-up (ISO 14118:2017)*

EN 61800-5-2:2017, *Adjustable speed electrical power drive systems - Part 5-2: Safety requirements - Functional*

EN IEC 60079-0:2018,² *Explosive atmospheres — Part 0: Equipment — General requirements (IEC 60079 0:2017)*

EN IEC 62485-2:2018, *Safety requirements for secondary batteries and battery installations - Part 2: Stationary batteries*

EN 60079-14:2014,³ *Explosive atmospheres — Part 14: Electrical installations design, selection and erection (IEC 60079-14:2013)*

EN ISO 898-1:2013,⁴ *Mechanical properties of fasteners made of carbon steel and alloy steel — Part 1: Bolts, screws and studs with specified property classes — Coarse thread and fine pitch thread (ISO 898-1:2013)*

EN ISO 3834-1:2021, *Quality requirements for fusion welding of metallic materials - Part 1: Criteria for the selection of the appropriate level of quality requirements (ISO 3834-1:2021)*

EN ISO 3834-2:2021, *Quality requirements for fusion welding of metallic materials - Part 2: Comprehensive quality requirements (ISO 3834-2:2021)*

EN ISO 3834-3:2021, *Quality requirements for fusion welding of metallic materials - Part 3: Standard quality requirements (ISO 3834-3:2021)*

EN ISO 3834-4:2021, *Quality requirements for fusion welding of metallic materials - Part 4: Elementary quality requirements (ISO 3834-4:2021)*

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² As impacted by EN IEC 60079-0:2018/AC:2020-02.

³ As impacted by N 60079-14:2014/AC:2016

⁴ As impacted by EN ISO 898-1:2013/AC:2013

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

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EN ISO 12944-2:2017, *Paints and varnishes - Corrosion protection of steel structures by protective paint systems - Part 2: Classification of environments (ISO 12944-2:2017)*

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EN ISO 12944-6:2018, *Paints and varnishes - Corrosion protection of steel structures by protective paint systems - Part 6: Laboratory performance test methods (ISO 12944-6:2018)*

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EN ISO 12944-9:2018, *Paints and varnishes - Corrosion protection of steel structures by protective paint systems - Part 9: Protective paint systems and laboratory performance test methods for offshore and related structures (ISO 12944-9:2018)*

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EN ISO 13857:2019, *Safety of machinery - Safety distances to prevent hazard zones being reached by upper and lower limbs (ISO 13857:2019)*

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EN ISO 80079-37:2016, *Explosive atmospheres - Part 37: Non-electrical equipment for explosive atmospheres - Non-electrical type of protection constructional safety "c", control of ignition sources "b", liquid immersion "k" (ISO 80079-37:2016)*

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EN 61310-3:2008, *Safety of machinery - Indication, marking and actuation - Part 3: Requirements for the location and operation of actuators*

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IEC 61892-4:2019, *Mobile and fixed offshore units — Electrical installations — Part 4: Cables*

IEC 61892-6:2019, *Mobile and fixed offshore units — Electrical installations — Part 6: Installation*

⁵ As impacted by EN ISO 80079-36:2016/AC:2019.

⁶ As impacted by EN 60529:1991/AC:2006-12, EN 60529:1991/A1:2000, EN 60529:1991/A2:2013 and EN 60529:1991/A2:2013/AC:2019-02.

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ISO 3864-3:2024, *Graphical symbols — Safety colours and safety signs — Part 3: Design principles for graphical symbols for use in safety signs*

ISO 3864-4:2011, *Graphical symbols — Safety colours and safety signs — Part 4: Colorimetric and photometric properties of safety sign materials*

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ISO 12478-1:1997, *Cranes — Maintenance manual — Part 1: General*

ISO 12480-1:1997, *Cranes — Safe use — Part 1: General*

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ISO 20332:2016, *Cranes — Proof of competence of steel structures*

ISO 23815-1:2007, *Cranes — Maintenance — Part 1: General*

3 Terms and definitions

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

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

3.1

abnormal event

unexpected feedback or lack of feedback, discrepancy, fault or malfunction of a part of a control system, for example sensors, equipment, software and hardware, which may indicate a hazardous situation

⁷ As impacted by ISO 2631-1:1997/Amd 1:2010