SLOVENSKI STANDARD
SIST EN IEC 61400-8:2024

01-oktober-2024

Sistemi za proizvodnjo energije na veter - 8. del: Projektiranje delov konstrukcije vetrnih turbin (IEC 61400-8:2024)

Wind energy generation systems - Part 8: Design of wind turbine structural components (IEC 61400-8:2024)

Windenergieanlagen – Teil 8: Design von Windenergieanlagen-Strukturkomponenten (IEC 61400-8:2024)

Systèmes de génération d'énergie éolienne - Partie 8: Conception des composants structurels des éoliennes (IEC 61400-8:2024)

Ta slovenski standard je istoveten z: **EN IEC 61400-8:2024**

ICS:

27.180	Vetrne elektrarne	Wind turbine energy systems

SIST EN IEC 61400-8:2024 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 61400-8

August 2024

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English Version

Wind energy generation systems - Part 8: Design of wind turbine structural components (IEC 61400-8:2024)

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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

European foreword

The text of document 88/1010/FDIS, future edition 1 of IEC 61400-8, prepared by IEC/TC 88 "Wind energy generation systems" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61400-8:2024.

The following dates are fixed:

• latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2025-05-07
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2027-08-07

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Endorsement notice

The text of the International Standard IEC 61400-8:2024 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standard indicated:

ISO 12944-5:2019 NOTE Approved as EN ISO 12944-5:2019 (not modified)

ISO 1461:2022 NOTE Approved as EN ISO 1461:2022 (not modified)

ISO 14713-1:2017 NOTE Approved as EN ISO 14713-1:2017 (not modified)

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cencenelec.eu.

Publication	Year	Title	EN/HD	Year
IEC 61400-1	2019	Wind energy generation systems - Part 1: Design requirements	EN IEC 61400-1	2019
IEC 61400-3-1	2019	Wind energy generation systems - Part 3-1: Design requirements for fixed offshore wind turbines	EN IEC 61400-3-1	2019
-	-		+ A11	2020
IEC/TS 61400-3-2	2019	Wind energy generation systems - Part 3-2: Design requirements for floating offshore wind turbines	-[1]	-
IEC 61400-5	2020	Wind energy generation systems - Part 5: Wind turbine blades	EN IEC 61400-5	2020
IEC 61400-6	2020	Wind energy generation systems - Part 6: Tower and foundation design requirements	EN IEC 61400-6	2020
IEC 61400-13	2015	Wind turbines - Part 13: Measurement of mechanical loads	EN 61400-13	2016
ISO/IEC 17025	2017	General requirements for the competence of testing and calibration laboratories	EN ISO/IEC 17025	2017
ISO 148-1	2016	Metallic materials - Charpy pendulum impact test - Part 1: Test method	EN ISO 148-1	2016
ISO 945-1	2019	Microstructure of cast irons - Part 1: Graphite classification by visual analysis	EN ISO 945-1	2019
ISO 1083	2018	Spheroidal graphite cast irons - Classification	-	-
ISO 1099	2017	Metallic materials - Fatigue testing - Axial force-controlled method	-	-
ISO 1143	2021	Metallic materials - Rotating bar bending fatigue testing	-	-

[1] To be published. Stage at time of publication: FprEN IEC 61400-3-2:2024.

ISO 2394	2015	General principles on reliability for structures	-	-
ISO 3800	1993	Threaded fasteners; axial load fatigue testing; test methods and evaluation of results	-	-
ISO 6892-1	2019	Metallic materials - Tensile testing - Part 1: Method of test at room temperature	EN ISO 6892-1	2019
ISO 7500-1	2018	Metallic materials - Calibration and verification of static uniaxial testing machines - Part 1: Tension/compression testing machines - Calibration and verification of the force-measuring system	EN ISO 7500-1	2018
ISO 12107	2012	Metallic materials - Fatigue testing - Statistical planning and analysis of data	-	-
ISO 12108	2018	Metallic materials - Fatigue testing - Fatigue crack growth method	-	-
ISO 12135	2021	Metallic materials - Unified method of test for the determination of quasistatic fracture toughness	-	-
ISO/TR 14345	2012	Fatigue - Fatigue testing of welded components - Guidance	-	-
ISO 16269-6	2014	Statistical interpretation of data - Part 6: Determination of statistical tolerance intervals	-	-
ASTM-E466-21	2021	Standard Practice for Conducting Force Controlled Constant Amplitude Axial Fatigue Tests of Metallic Materials	-	-
BS 7910	2013	Guide to methods for assessing the acceptability of flaws in metallic structures	-	-
-	-	Personal fall protection equipment - Anchor devices - Recommendations for anchor devices for use by more than one person simultaneously	CEN/TS 16415	2013
-	-	Execution of steel structures and aluminium structures - Part 2: Technical requirements for steel structures	EN 1090-2	2018
-	-	Execution of steel structures and aluminium structures - Part 3: Technical requirements for aluminium structures	EN 1090-3	2019
-	-	Founding - Magnetic particle testing	EN 1369	2012
-	-	Founding - Magnetic particle inspection	EN 1369	1996
-	-	Founding - Liquid penetrant testing - Part 1: Sand, gravity die and low pressure die castings	EN 1371-1	2011
-	-	Founding - Liquid penetrant inspection - Part 1: Sand, gravity die and low pressure die castings	EN 1371-1	1997
-	-	Eurocode 3: Design of steel structures - Part 1-8: Design of joints	EN 1993-1-8	2007

-	-	Eurocode 3: Design of steel structures - Part 1-9: Fatigue	EN 1993-1-9	2007
-	-	Eurocode 3: Design of steel structures - Part 1-10: Material toughness and through-thickness properties	EN 1993-1-10	2007
-	-	Eurocode 9: Design of aluminium structures - Part 1-1: General structural rule	EN 1991-1-1	2008
-	-	Eurocode 9: Design of aluminium structures - Part 1-3: Structures susceptible to fatigue	EN 1999-1-3	2007
-	-	Ultrasonic examination - Part 3: Spheroidal graphite cast iron castings	EN 12680-3	2011
-	-	Wind turbines - Protective measures - Requirements for design, operation and maintenance	EN 50308	2004
DIN 50100	2016	Load controlled fatigue testing - Execution and evaluation of cyclic tests at constant load amplitudes on metallic specimens and components	-	-
FKM Guideline	2018	Fracture Mechanics Proof of Strength for Engineering Components (FKM – RBM-04-18)	-	-
IIW-Doc. 2259-152259-15	2014	Recommendations for fatigue design of welded joints and components, International Institute of Welding	-	-
IIW-Doc. XIII-2240r2-08/XV-1289r2-08	2010	Guideline for the Fatigue Assessment by Notch Stress Analysis for Welded Structures	-	-
VDI 2230-1	2015	Systematic calculation of highly stressed bolted joints - Joints with one cylindrical bolt	-	-
VDI 2230-2	2014	Systematic calculation of high duty bolted joints - Joints with several cylindrical bolts	-	-
VDMA 23902	2014	Guideline for fracture mechanical strength assessment of planet carriers made of nodular cast iron EN-GJS-700-2 for wind turbine gear boxes, Verband Deutscher Maschinen- und Anlagenbau e.V.	-	-

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INTERNATIONAL STANDARD

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colour inside

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Part 8: Design of wind turbine structural components

Systèmes de génération d'énergie éolienne –
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WIND ENERGY GENERATION SYSTEMS –

Part 8: Design of wind turbine structural components

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IEC 61400-8 has been prepared by IEC technical committee 88: Wind energy generation systems. It is an International Standard.

The text of this International Standard is based on the following documents:

Draft	Report on voting
88/1010/FDIS	88/1023/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

A list of all parts of the IEC 61400 series, under the general title: *Wind energy generation systems*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

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- withdrawn, or
- revised.

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