SVENSK STANDARD SS-EN 61400-22

Fastställd	Utgåva	Sida	Ansvarig kommitté
2011-07-06	1	1 (1+79)	SEK TK 88

Vindkraftverk – Del 22: Typprovning och certifiering

Wind turbines – Part 22: Conformity testing and certification

Som svensk standard gäller europastandarden EN 61400-22:2011. Den svenska standarden innehåller den officiella engelska språkversionen av EN 61400-22:2011.

Nationellt förord

Europastandarden EN 61400-22:2011

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
– **IEC 61400-22, First edition, 2010 - Wind turbines - Part 22: Conformity testing and certification**

utarbetad inom International Electrotechnical Commission, IEC.

ICS 27.180

Denna standard är fastställd av SEK Svensk Elstandard,
som också kan lämna upplysningar om **sakinnehållet** i standarden.
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Standarder underlättar utvecklingen och höjer elsäkerheten

Det finns många fördelar med att ha gemensamma tekniska regler för bl a säkerhet, prestanda, dokumentation, utförande och skötsel av elprodukter, elanläggningar och metoder. Genom att utforma sådana standarder blir säkerhetskraven tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

Många standarder inom elområdet beskriver tekniska lösningar och metoder som åstadkommer den elsäkerhet som föreskrivs av svenska myndigheter och av EU.

SEK är Sveriges röst i standardiseringsarbetet inom elområdet

SEK Svensk Elstandard svarar för standardiseringen inom elområdet i Sverige och samordnar svensk medverkan i internationell och europeisk standardisering. SEK är en ideell organisation med frivilligt deltagande från svenska myndigheter, företag och organisationer som vill medverka till och påverka utformningen av tekniska regler inom elektrotekniken.

SEK samordnar svenska intressenters medverkan i SEKs tekniska kommittéer och stödjer svenska experters medverkan i internationella och europeiska projekt.

Stora delar av arbetet sker internationellt

Utformningen av standarder sker i allt väsentligt i internationellt och europeiskt samarbete. SEK är svensk nationalkommitté av International Electrotechnical Commission (IEC) och Comité Européen de Normalisation Electrotechnique (CENELEC).

Standardiseringsarbetet inom SEK är organiserat i referensgrupper bestående av ett antal tekniska kommittéer som speglar hur arbetet inom IEC och CENELEC är organiserat.

Arbetet i de tekniska kommittéerna är öppet för alla svenska organisationer, företag, institutioner, myndigheter och statliga verk. Den årliga avgiften för deltagandet och intäkter från försäljning finansierar SEKs standardiseringsverksamhet och medlemsavgift till IEC och CENELEC.

Var med och påverka!

Den som deltar i SEKs tekniska kommittéarbete har möjlighet att påverka framtida standarder och får tidig tillgång till information och dokumentation om utvecklingen inom sitt teknikområde. Arbetet och kontakterna med kollegor, kunder och konkurrenter kan gynnsamt påverka enskilda företags affärsutveckling och bidrar till deltagarnas egen kompetensutveckling.

Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 61400-22

January 2011

ICS 27.180

English version

Wind turbines - Part 22: Conformity testing and certification

(IEC 61400-22:2010)

Eoliennes - Partie 22: Essais de conformité et certification (CEI 61400-22:2010)

Windenergieanlagen - Teil 22: Konformitätsprüfung und Zertifizierung (IEC 61400-22:2010)

This European Standard was approved by CENELEC on 2011-01-02. CENELEC 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 Central Secretariat or to any CENELEC 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 CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

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

CENELEC

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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Ref. No. EN 61400-22:2011 E

SEK Svensk Elstandard

Foreword

The text of document 88/365/FDIS, future edition 1 of IEC 61400-22, prepared by IEC TC 88, Wind turbines, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61400-22 on 2011-01-02.

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

The following dates were fixed:

– latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2011-10-02
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2014-01-02

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61400-22:2010 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 standards indicated:

IEC 60034-1	NOTE	Harmonized as EN 60034-1.
IEC 60076-1	NOTE	Harmonized as EN 60076-1.

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	EN/HD	Year
IEC 60034	Series	Rotating electrical machines	EN 60034	Series
IEC 60050-415	-	International Electrotechnical Vocabulary - Part 415: Wind turbine generator systems	-	-
IEC 61400	Series	Wind turbines	EN 61400	Series
IEC 61400-1	-	Wind turbines - Part 1: Design requirements	EN 61400-1	-
IEC 61400-2	-	Wind turbine - Part 2: Design requirements for small wind turbines	EN 61400-2	-
IEC 61400-3	2009	Wind turbines - Part 3: Design requirements for offshore wind turbines	EN 61400-3	2009
IEC 61400-11	-	Wind turbine generator systems - Part 11: Acoustic noise measurement techniques	EN 61400-11	-
IEC 61400-12-1	-	Wind turbines - Part 12-1: Power performance measurements of electricity producing wind turbines	EN 61400-12-1	-
IEC/TS 61400-13	-	Wind turbine generator systems - Part 13: Measurement of mechanical loads	-	-
IEC 61400-21	-	Wind turbines - Part 21: Measurement and assessment of power quality characteristics of grid connected wind turbines	EN 61400-21	-
IEC/TS 61400-23	-	Wind turbine generator systems - Part 23: Full-scale structural testing of rotor blades	-	-
IEC 61400-24	-	Wind turbines - Part 24: Lightning protection	EN 61400-24	-
ISO/IEC 17020	-	General criteria for the operation of various types of bodies performing inspection	EN ISO/IEC 17020	-
ISO/IEC 17021	-	Conformity assessment - Requirements for bodies providing audit and certification of management systems	EN ISO/IEC 17021	-
ISO/IEC 17025	-	General requirements for the competence of testing and calibration laboratories	EN ISO/IEC 17025	-

Publication	Year	Title	EN/HD	Year
ISO/IEC Guide 2	-	Standardization and related activities - General vocabulary	EN 45020	-
ISO/IEC Guide 65	-	General requirements for bodies operating product certification systems	EN 45011	-
ISO 81400-4	2005	Wind turbines - Part 4: Design and specification of gearboxes	-	-
ISO 9001	2008	Quality management systems - Requirements	EN ISO 9001	2008

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INTRODUCTION

This International Standard defines rules and procedures for conformity testing and certification of wind turbines with respect to standards and technical requirements for wind turbines and wind farms. It is intended to facilitate mutual recognition (reciprocal acceptance) by participants of test results and certificates issued by other participants for obtaining certification at national level and operates within the scope of the IEC 61400 series of standards and technical specifications for wind turbines.

The certification procedures in this standard constitute a complete third party conformity evaluation of a wind turbine type, a major component type or one or more wind turbines at a specific location.

In addition to design verification and testing, this standard provides information for the recognition of or assessment for approval of the supplier's quality system, regular surveillance through inspection of the supplier's quality system and quality plans, and audit testing of samples. The standard is amongst others intended to result in significant benefit to the applicant by reducing the number of steps necessary to obtain certification or approval at national level.

WIND TURBINES –

Part 22: Conformity testing and certification

1 Scope

This International Standard defines rules and procedures for a certification system for wind turbines (WT) that comprises both type certification and certification of wind turbine projects installed on land or off-shore. This system specifies rules for procedures and management for carrying out conformity evaluation of WT and wind farms, with respect to specific standards and other technical requirements, relating to safety, reliability, performance, testing and interaction with electrical power networks. It provides:

– definitions of the elements in a wind turbine certification process;

– procedures for conformity evaluation in a wind turbine certification system;

– procedures for conformity surveillance;

– rules for the documentation that is to be supplied by an applicant for the conformity evaluation; and

– requirements for certification and inspection bodies and testing laboratories.

The rules and procedures are not limited to WT of any particular size or type. However, special rules and procedures apply for small wind turbines (SWT). Some elements of certification are mandatory, whilst provision is specifically made for others to be optional. For type certification, the document describes procedures relating to conformity testing, design, manufacture, and the plans for transportation, erection, installation and maintenance. The procedures deal with the assessment of loads and safety, testing, characteristics measurements and surveillance of manufacturing. For project certification, the document describes procedures relating to the assessment that particular wind turbines and support structure/foundation designs in a project are appropriate for the application and relating to transportation, installation, commissioning, operation and maintenance. The procedures deal with assessment in accordance with all modules in this document, e.g. the site conditions, the design of site-specific components and surveillance of manufacturing, transportation, installation and operation.

The purpose of the rules and procedures is to provide a common basis for certification of wind turbines and wind turbine projects, including a basis for acceptance of operating bodies (i.e. certification bodies, inspection bodies and testing laboratories) and mutual recognition of certificates.

The rules and procedures are intended to be used in conjunction with the appropriate IEC/ISO standards and Guides, see Clause 2.

2 Normative references

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.

NOTE In the case where an earlier or withdrawn edition of the referenced normative document is used together with this document, these earlier editions must be specified in the Agreement for Certification, see Subclause 6.2, and in conformity statements and certificates.

IEC 60034 (all parts), *Rotating electrical machines*

IEC 60050-415, *International Electrotechnical Vocabulary – Part 415: Wind turbine generator systems*

IEC 61400 (all parts), *Wind turbines*

IEC 61400-1, *Wind turbines – Part 1: Design requirements*

IEC 61400-2, *Wind turbines – Part 2: Design requirements for small wind turbines*

IEC 61400-3:2009, *Wind turbines – Part 3: Design requirements for offshore wind turbines*

IEC 61400-11, *Wind turbine generator systems – Part 11: Acoustic noise measurement techniques*

IEC 61400-12-1, *Wind turbines – Part 12-1: Power performance measurements of electricity producing wind turbines*

IEC/TS 61400-13, *Wind turbine generator systems – Part 13: Measurement of mechanical loads*

IEC 61400-21, *Wind turbines – Part 21: Measurement and assessment of power quality characteristics of grid connected wind turbines*

IEC/TS 61400-23, *Wind turbine generator systems – Part 23: Full-scale structural testing of rotor blades*

IEC 61400-24, *Wind turbines – Part 24: Lightning protection*

ISO/IEC 17020, *General criteria for the operation of various types of bodies performing inspection*

ISO/IEC 17021, *Conformity assessment – Requirements for bodies providing audit and certification of management systems*

ISO/IEC 17025, *General requirements for the competence of testing and calibration laboratories*

ISO/IEC Guide 2: *Standardization and related activities – General vocabulary*

ISO/IEC Guide 65, *General requirements for bodies operating product certification systems*

ISO 9001:2008, *Quality management systems – Requirements*

ISO 81400-4:2005, *Wind turbines – Part 4: Design and specification of gearboxes* [1)]

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1) To be replaced by IEC 61400-4.