



SLOVENSKI STANDARD
SIST EN 61400-23:2014

01-september-2014

Sistemi generatorjev za vetrne turbine - 23. del: Popolno strukturno preskušanje krakov rotorja (IEC 61400-23:2014)

Wind turbine generator systems - Part 23: Full-scale structural testing of rotor blades

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ICS:

27.180

Sistemi turbin na veter in
drugi alternativni viri energije

Wind turbine systems and
other alternative sources of
energy

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EUROPEAN STANDARD

EN 61400-23

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English Version

**Wind turbines - Part 23: Full-scale structural testing
of rotor blades
(IEC 61400-23:2014)**

Éoliennes - Partie 23: Essais en vraie grandeur
des structures des pales de rotor
(CEI 61400-23:2014)

Windenergieanlagen - Teil 23: Rotorblätter -
Experimentelle Strukturprüfung
(IEC 61400-23:2014)

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Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Foreword

The text of document 88/420/CDV, future edition 1 of IEC 61400-23, prepared by IEC TC 88 "Wind turbines" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61400-23:2014.

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) 2015-02-13
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2017-05-13

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

IEC 61400-22 NOTE Harmonised as EN 61400-22 (not modified).

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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.

NOTE 1 When 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.cenelec.eu

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60050-415	1999	International Electrotechnical Vocabulary - Part 415: Wind turbine generator systems	-	-
IEC 61400-1	2005	Wind turbines - Part 1: Design requirements	EN 61400-1	2005
ISO/IEC 17025	2005	General requirements for the competence of testing and calibration laboratories	EN ISO/IEC 17025	2005
ISO 2394	1986	General principles on reliability for structures	-	-

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IEC 61400-23

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INTERNATIONAL STANDARD



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

WIND TURBINES –

Part 23: Full-scale structural testing of rotor blades

FOREWORD

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International Standard IEC 61400-23 has been prepared by IEC technical committee 88: Wind turbines.

This first edition cancels and replaces IEC TS 61400-23, published in 2001. It constitutes a technical revision.

This edition includes the following significant technical changes with respect to IEC TS 61400-23:

- a) description of load based testing only;
- b) condensation to describe the general principles and demands.

The text of this standard is based on the following documents:

CDV	Report on voting
88/420/CDV	88/448/RVC

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

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 61400 series, published under the general title *Wind turbines*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

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INTRODUCTION

The blades of a wind turbine rotor are generally regarded as one of the most critical components of the wind turbine system. In this standard, the demands for full-scale structural testing related to certification are defined as well as the interpretation and evaluation of test results.

Specific testing methods or set-ups for testing are not demanded or included as full-scale blade testing methods historically have developed independently in different countries and laboratories.

Furthermore, demands for tests determining blade properties are included in this standard in order to validate some vital design assumptions used as inputs for the design load calculations.

Any of the requirements of this standard may be altered if it can be suitably demonstrated that the safety of the system is not compromised.

The standard is based on IEC TS 61400-23 published in 2001. Compared to the TS, this standard only describes load based testing and is condensed to describe the general principles and demands.

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