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IEC System for Conformity Testing and Certification of Wind Turbines

Rules and procedures

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CONTENTS

Clause Page

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IEC SYSTEM FOR CONFORMITY TESTING AND CERTIFICATION OF WIND TURBINES – RULES AND PROCEDURES

FOREWORD

This publication has been prepared by TC 88: Wind turbine systems, and has been approved by the Conformity Assessment Board (CAB). It defines a certification system for wind turbines.

It specifies rules of procedure and management for carrying out conformity evaluation with respect to standards and technical requirements for wind turbines. This document is intended to be used with other technical standards and normative documents and, where necessary, technical requirements and test procedures are specified.

Compliance with this system does not relieve any person, organisation or corporation of the responsibility for observing other applicable regulations.

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

Documents	Report on voting
88/115/CDV	
CAB/235A/DV	CAB/270/RV

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

INTRODUCTION

NOTE This INTRODUCTION provides an overview of the IEC WT System and is not part of the Rules.

The international scheme for recognition of results of testing to standards for wind turbines is operated by the IEC, and known as the IEC WT System. The IEC WT System is based on the principle of 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 for wind turbines.

In addition to type testing, the IEC WT System provides for the recognition of or assessment for approval of the manufacturer's quality system, regular surveillance through inspection of the manufacturer's factory quality system and product quality plans, and audit testing of samples from the manufacturer's factory. The System is intended to result in significant benefit to the manufacturer by reducing the number of steps necessary to obtain certification or approval at national level.

IEC SYSTEM FOR CONFORMITY TESTING AND CERTIFICATION OF WIND TURBINES – RULES AND PROCEDURES

1 Title

The title of the System is:

IEC System for conformity testing and certification of wind turbines", hereinafter referred to as "the IEC WT System".

2 Object

Taking into account the object of the International Electrotechnical Commission (IEC), as given in Article 2 of the Statutes, the particular object of the IEC WT System, operated under the authority of the IEC in conformity with the Statutes, is to facilitate international trade in wind turbine generator systems which comply with one or more of the IEC standards prepared by IEC TC 88. This compliance, should reduce the number of steps necessary to obtain certification or approval at national level whilst preserving an appropriate level of safety.

3 Governing documents

The documents which state the Rules of the IEC WT System and which govern the organization of its work are as follows:

– the Statutes of the IEC;

– the Rules of Procedure of the IEC and the ISO/IEC Directives, unless otherwise specified in the Rules of Procedure of the IEC WT System;

– the Rules and Procedures which define the principles of the IEC WT System and which are approved by the CAB;

4 Organization

The system shall be monitored by an overseeing group, comprising the IEC TC 88 officers. The overseeing group reports annually to the CAB on the use and development of the IEC WTGS System.

5 Scope

This publication defines a certification system for wind turbines (IEC WT). It specifies rules for procedures and management to carry out conformity evaluation of WTs, 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 the 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 standard is not limited to WTs of any particular size or type. It describes procedures relating to design, manufacture, erection and installation, operation and maintenance, and decommissioning. The procedures deal with the assessment of loads and safety, testing, characteristics measurements and surveillance of manufacturing, installation and operation. Some elements of certification are mandatory, whilst provision is specifically made for others to be optional. The purpose of the standard is to provide a common basis for certification of wind turbines, including a basis for acceptance of operating bodies and mutual recognition of certificates.

The standard shall be used in conjunction with the appropriate IEC/ISO standards and Guides, see clause 6.

6 References

The following documents contain normative provisions, which, through reference in this text, constitute provisions of the International Standard. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents referenced below. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 61400-1: (Ed. 2, 1999), *Wind turbine generator systems. Safety requirements*.

IEC 61400-2:1996, *Wind turbine generator systems. Safety of small wind turbines*.

IEC 61400-11:1998, *Wind turbine generator systems. Acoustic noise measurement techniques*.

IEC 61400-12:1998, *Wind turbine generator systems. Wind turbine power performance testing*

IEC 61400-13 TS Ed 1(in preparation): *Wind turbine generator systems. Mechanical load measurements*.

IEC 61400-21:2001, *Wind turbine generator systems. Power quality requirements for grid connected wind turbines*

IEC 61400-23 TS (In preparation): *Wind turbine generator systems. Full-scale structural testing of rotor blades for WTGs*.

IEC 60050-415:1999, *International Electrotechnical Vocabulary (IEV), Chapter 415: Wind Turbine Systems*

ISO/IEC Guide 2:1986, *General terms and their definitions concerning standardization and related activities*.

IEC/ISO 17020:1999, *General criteria for the operation of bodies performing inspection*

IEC/ISO 17025:1999, *General requirements for the competence of calibration and testing laboratories*.

ISO/IEC Guide 62:1996, *General requirements for bodies operating assessment and certification/registration of quality systems*.

ISO/IEC Guide 65:1996, *General requirements for bodies operating product certification systems.*

ISO 8402:1994, *Quality management and quality assurance – Vocabulary*

ISO 9001:1994, *Quality systems – Model for quality assurance in design, development, production, installation and servicing.*

ISO 9002:1994, *Quality systems – Model for quality assurance in production, installation and servicing.*