TECHNICAL SPECIFICATION

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Wind turbines –

Part 14: Declaration of apparent sound power level and tonality values

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WIND TURBINES –

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Technical specifications are subject to review within three years of publication to decide whether they can be transformed into International Standards.

IEC 61400-14, which is a technical specification, has been prepared by IEC technical committee 88: Wind turbines.

The text of this technical specification is based on the following documents:

Enquiry draft	Report on voting
88/193/DTS	88/222/RVC

Full information on the voting for the approval of this technical specification 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.

IEC 61400 consists of the following parts, under the general title *Wind turbines:*

Part 1: Design requirements

Part 2: Safety of small wind turbines

Part 11: Acoustic noise measurement techniques

Part 12: Wind turbine power performance testing

Part 13: Measurement of mechanical loads

Part 14: Declaration of apparent sound power level and tonality values

Part 21: Measurement and assessment of power quality characteristics of grid connected wind turbines

Part 23: Full-scale structural testing of rotor blades

Part 24: Lightning protection

The committee has decided that the contents of this publication will remain unchanged until the maintenance result 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

- transformed into an International standard,
- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

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

INTRODUCTION

Information on the apparent sound power level and tonality of wind turbines is needed by planners, manufacturers and authorities. At present, wind turbine noise specifications tend to be based on measurement results from a single turbine of a particular make and model, and these are then taken to be representative of these turbines as a whole. Clearly, this is unlikely to be the case, as there will be individual variation between different turbines. The intention of this technical specification is to determine declared noise emission values from a sample of turbines of the same type. The declaration will increase the reliability of wind farm planning and facilitate the comparison of apparent sound power levels and tonality values of different types of wind turbines.

WIND TURBINES –

Part 14: Declaration of apparent sound power level and tonality values

1 Scope

This part of IEC 61400 gives guidelines for declaring the apparent sound power level and tonality of a batch of wind turbines. The measurement procedures for apparent sound power level and tonality are defined in IEC 61400-11.

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.

IEC 61400-11:2002, *Wind turbines – Part 11: Acoustic noise measurement techniques*

ISO 4871:1996, *Acoustics – Declaration and verification of noise emission values of machinery and equipment*

ISO 7574 (all parts), *Acoustics – Statistical methods for determining and verifying stated noise emission values of machinery and equipment*