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Wind energy generation systems - Part 5: Wind turbine blades

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NATIONAL FOREWORD

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English Version

Wind energy generation systems - Part 5: Wind turbine blades
(IEC 61400-5:2020)

Systèmes de génération d'énergie éolienne - Partie 5:
Pales d'éoliennes
(IEC 61400-5:2020)

Windenergieanlagen - Teil 5: Rotorblätter von
Windenergieanlagen
(IEC 61400-5:2020)

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European foreword

The text of document 88/759/FDIS, future edition 1 of IEC 61400-5, prepared by IEC/TC 88 "Wind energy generation systems" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61400-5:2020.

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Annex ZA

(normative)

Normative references to international publications with their corresponding European publications

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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	-	International Electrotechnical Vocabulary - Part 415: Wind turbine generator systems	-	-
IEC 61400-1	-	Wind energy generation systems - Part 1: Design requirements	EN IEC 61400-1	-
IEC 61400-2	-	Wind turbines - Part 2: Small wind turbines	EN 61400-2	-
IEC 61400-3-1	-	Wind energy generation systems - Part 3-1: Design requirements for fixed offshore wind turbines	EN IEC 61400-3-1	-
IEC 61400-3-2	-	Wind energy generation systems - Part 3-2: Design requirements for floating offshore wind turbines	-	-
IEC 61400-23	-	Wind turbines - Part 23: Full-scale structural testing of rotor blades	EN 61400-23	-
IEC 61400-24	-	Wind energy generation systems - Part 24: Lightning protection	EN IEC 61400-24	-
ISO/IEC 17021-1	-	Conformity assessment - Requirements for bodies providing audit and certification of management systems - Part 1: Requirements	EN ISO/IEC 17021-1	-
ISO 10474	-	Steel and steel products - Inspection documents	-	-
ISO 2394	-	General principles on reliability for structures	-	-
ISO 9000	-	Quality management systems - Fundamentals and vocabulary	EN ISO 9000	-

ISO 9001	-	Quality management systems Requirements	-	EN ISO 9001	-
	-	Metallic products - Types of inspection documents		EN 10204	-
ISO 16269-6	-	Statistical interpretation of data - Part 6: Determination of statistical tolerance intervals	-	-	-

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Wind energy generation systems –
Part 5: Wind turbine blades**

**Systèmes de génération d'énergie éolienne –
Partie 5: Pales d'éoliennes**





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INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Wind energy generation systems –
Part 5: Wind turbine blades**

**Systèmes de génération d'énergie éolienne –
Partie 5: Pales d'éoliennes**

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88/759/FDIS	88/767/RVD

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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 International Standard, a minimum set of requirements for the design and manufacturing of wind turbine blades are defined.

An approach to a structural design process for the blade is set forth in the general areas of blade characteristics, aerodynamic design, material requirements and structural design. Furthermore, in order to efficiently facilitate the transfer of a blade design to the production environment, this document includes demands for designing for manufacturing.

The requirements for structural design of the wind turbine blade have been developed in a manner to reward innovation, validation, quality and testing. Specifically, the designer will be able claim lower partial safety factors based on, among other items, the diligence of the validation of models and the correlation to testing results.

To ensure a production environment that can facilitate the manufacturing of a blade in accordance with the design, the manufacturing requirements included in this document provide a minimum basis for a quality management system and workshop requirements. In addition, requirements for blade handling, operation and maintenance are described in the close of this document.