

1. Record Nr.	UNINA9910787765703321
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Titolo	Advances in wind turbine blade design and materials / / edited by Povl Brondsted and Rogier P.L. Nijssen
Pubbl/distr/stampa	Cambridge : , : Woodhead Publishing, , 2013
ISBN	0-85709-728-8
Edizione	[1st edition]
Descrizione fisica	1 online resource (xxii, 461 pages) : illustrations
Collana	Woodhead Publishing series in energy ; ; number 47
Disciplina	621.165
Soggetti	Turbines - Blades - Design and construction Turbines - Blades - Materials Wind turbines - Materials Wind turbines - Aerodynamics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"ISSN: 2044-9364."
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	part I. Wind turbine blade design : challenges and developments -- part II. Fatigue behaviour of composite wind turbine blades -- part III. Advances in wind turbine blade materials, development and testing.
Sommario/riassunto	Wind energy is gaining critical ground in the area of renewable energy, with wind energy being predicted to provide up to 8% of the world's consumption of electricity by 2021. Advances in wind turbine blade design and materials reviews the design and functionality of wind turbine rotor blades as well as the requirements and challenges for composite materials used in both current and future designs of wind turbine blades. Part one outlines the challenges and developments in wind turbine blade design, including aerodynamic and aeroelastic design features, fatigue loads on wind turbine bla