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3.3.2 Design for Fatigue Strength: No Deflection Limits 3.4 The Effective t/c Ratio of Aerofoil Sections; 3.5 Blade Design Studies: Example of a Parametric Analysis; 3.6 Industrial Blade Technology; 3.6.1 Design; 3.6.2 Manufacturing; 3.6.3 Design Development; References; 4 Upscaling of Wind Turbine Systems; 4.1 Introduction: Size and Size Limits; 4.2 The 'Square-Cube' Law; 4.3 Scaling Fundamentals; 4.4 Similarity Rules for Wind Turbine Systems; 4.4.1 Tip Speed; 4.4.2 Aerodynamic Moment Scaling; 4.4.3 Bending Section Modulus Scaling; 4.4.4 Tension Section Scaling; 4.4.5 Aeroelastic Stability
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4.10 Cost Models

Sommario/riassunto

Innovation in Wind Turbine Design addresses the fundamentals of design, the reasons behind design choices, and describes the methodology for evaluating innovative systems and components. Always referencing a state of the art system for comparison, Jamieson discusses the basics of wind turbine theory and design, as well as how to apply existing engineering knowledge to further advance the technology, enabling the reader to gain a thorough understanding of current technology before assessing where it can go in the future. Innovation in Wind Turbine Design is divided into four