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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