Test projects for wind turbine generators

Are there standardized test requirements for a wind turbine?

However,for the system integration level,there are still no standardized test requirements. Nacelle testing is a fairly new approach compared with other aspects of wind turbine testing,such as structural testing of wind turbine support structures,which is already quite established in the design process.

Why do wind turbines need to be tested in advance?

Due to the limited number of available field testing sites,it is often the case that the testing facilities are fully booked in advance,leaving the wind turbine manufacturers with no other ways of testing their new prototypes and limiting the time to market .

How many blades can a wind turbine test?

The Wind Technology Testing Center,located near Boston,Massachusetts,can test up to three bladessimultaneously. It is the first commercial large-blade testing facility in the nation and allows for testing of blades as long as 300 feet (90 meters).

What is a GE wind turbine test?

Since the early 1990s, the program worked with GE and its predecessors to test components such as blades, generators, and control systems on generations of turbine designs that led to GE's 1.5-MW model, which has constituted approximately half of the nation's installed commercial wind energy fleet and is a major competitor in global markets.

What are the IEC standards for wind turbine testing & measurement?

From these,the following IEC standards exist for wind turbine system testing and measurement techniques: IEC 61400-22:2010Conformity testing and certification (withdrawn on 31-08-2018 and replaced with the deliverables for the wind sector (WE-OMC) contained in the IECRE Conformity Assessment System)

How does the wind industry develop turbine technology?

Generally, the wind industry follows the conventional approaches for turbine technology development using a combination of modeling tools, scaled-model validation testing, and risk mitigation through prototype field testing .

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