Pre-embedded bolts for wind blade power generation

Overview

Large-size stud bolt for wind turbine blades that has an integrated design to improve fastening and prevent loosening during operation of heavy blades. The screw threads into the base and the other end penetrates . The invention discloses a pre-buried bolt structure of a blade root of a wind power blade, which comprises a blade root, a packaging ring body, a pre-buried bolt, a locking screw and an elastic connector. The embedded bolt mounting structure is ingenious in design, the embedded bolts are mounted in . Wind turbine connections face extreme mechanical stresses, with blade-root bolts experiencing cyclical loads exceeding 1,600 MPa and pitch bearings managing multi-directional forces across connection interfaces. , can solve the problems of reducing blade strength and rigidity, heavy metal material weight, and difficult pre-embedding process, and saves money. The bolt sleeve connector comprises at least two extensions (250, 350) arranged side by side and separated apart.

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WO/2018/120677 BOLT SLEEVE CONNECTOR, BLADE AND

A bolt sleeve connector, a wind turbine blade, a manufacturing method for the wind turbine blade, and a wind turbine set. The bolt sleeve connector comprises at least two extensions (250, 350) arranged

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The wind power generation blade needs to be connected to the host machine through a blade root bolt, and the connection method mainly comprises two technologies of T-shaped bolts and

We4Ce's Solution For Stronger Blade Root Bushings

Edo explains the problem, its widespread impact on the wind energy sector, and introduces We4Ce's innovative solution - an upgraded blade bolt insert that can be retrofitted in the

Embedded bolt, prefabricated blade root, blade, forming method of

A technology of pre-embedding bolts and pre-embedding, which is applied to wind turbine components, wind turbine assemblies, wind turbines, etc., can solve the problems of reducing blade

BOLT SLEEVE CONNECTOR, BLADE AND

MANUFACTURING

[0003] At present, the blade root of the blade of the wind turbine generator system is connected with the rotor hub, and there are mainly two connection manners, that is, using the T

The Embedded Inserts For Wind Turbine Blades Made By The

By 2020, the high-strength embedded inserts for wind turbine blades developed by HNFW have accounted for 70% of the global market share. Products in the field of wind power:

Reinforced Connections for Wind Turbine Stability

A pre-embedded bolt connection structure for large wind turbine blades that allows increased blade diameter without adding many bolts. The structure uses an adapter flange with misaligned holes in

Innovating Wind-Turbine Blade Connections: T-Bolt vs. Insert

Two common types of blade root connections used in modern wind turbines are T-Bolt Type and Insert Type connections. Let's take a closer look at each.

High Strength Bolt Bushing for Wind Turbine Blade Connection

The embedded blade bolt bushing is made of metal, and it has very high anti-corrosion requirements for the outer surface. During embedded blade bolt bushing production, the impurities and oxide layer on

SwiftRoot - Improved innovative root solution for large wind

These inserts are infused with the blade's load-bearing laminates and manufactured with a high degree of automation, reducing service needs, repairs, and the risk of catastrophic blade failures. For large

High Strength Bolt Bushing for Wind Turbine Blade

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