

Mobile energy storage site wind power lightning protection environmental factors type I





Overview

What are lightning protection systems for wind turbines?

Lightning protection systems for wind turbines are based on the International Electrotechnical Commission (IEC) IEC 61400-24 standard. According to this standard, the lightning protection levels (LPLs) are set in accordance with the probability of minimum and maximum expected lightning currents, from I to IV.

What is a wind turbine lightning protection system (LPS)?

Lightning Protection Design Principles The wind turbine LPS consists of three main parts, the external protection system, the internal part, and the earthing system.

How to protect a wind turbine from lightning?

In order to plan protection measures, it is advisable to subdivide the wind turbine into lightning protection zones (LPZs). The lightning protection system of a wind turbine protects two sub-systems which can only be found in wind turbines, namely the rotor blades and the mechanical drive train.

Which components can be integrated in a wind turbine LPS?

Natural components made of conductive materials which are permanently installed in / on a wind turbine and remain un-changed (e.g., lightning protection system of the rotor blades, bearings, mainframes, hybrid tower) may be integrated in the LPS.



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