Lightning Risk Assessment for Wind Turbine

DEHN Services – Engineering Service Datasheet

Service	Lightning Risk Assessment for Wind Turbine incl. Report acc. Local & International Standards*
Part No.	E17202
Description	The Lightning Risk Analysis is the first step given in the standard to determine which lightning protection measures are required. A risk analysis according to IEC 61400-24 determines how statistically likely it is that losses due to lightning related damage will occur to an object. The standard gives tolerable values for the risks of damage and loss. This allowable value is compared to the calculated risk of the unprotected state of the object. Should the risk be higher than the tolerable values, a reduction to the risk is made by selecting lightning protection measures as defined in IEC 61400-24. The output can be used to plan for maintenance and investigate the need for lightning detection and blade monitoring for the lightning protection receptors in the wind turbine generator blades. The process is carried out with an advanced calculation tool and a report document is created showing the results.
Basis*	IEC 61400-24: 2019 Ed. 2.0. Older versions available on request (Intl) DIN EN 61400-24: 2019 Ed. 2.0. Older versions available on request (DE) SANS 61400-24: 2019 Ed. 2.0. Older versions available on request (ZA) VDE 0127-24 [5] – Lightning protection at Wind energy generation systems (DE) JIS C 1400-24: 2014 – Wind energy generation systems (JP) **Note: Unless clearly stated by the customer, the service will be carried out in accordance with the standard and current version applicable in the country in question. If the service is to be carried out in accordance with a different standard/version, this must be specified before the order is created.**
Outcomes	○ Calculation of risk, ○ Report with all results and measures such as lightning detection and blade monitoring systems. Report as a .pdf document delivered electronically.
Prerequisites	Minimum: ○ Geographic location of project (coordinates or .kmz), ○ Dimensions of structures/objects, ○ Information regarding conductive incoming services, ○ Soil resistivity values if cables are buried. All required details asked for in questionnaire form for accurate analysis.
Optional Additional Services	Soil Resistivity Testing / Measurement (Part No. E17102) to determine values required for an accurate Lightning Risk Analysis.