

Press Release

WindGuard Certification offers mobile testing of dynamic performance

New fault-ride-through test equipment can be used directly at customer's site

Varel, 2020-09-16: WindGuard Certification now offers a complete package of electrical characteristic measurements on power generating units, such as wind turbines, photovoltaic systems, energy storage facilities and internal combustion engines. For this purpose, the experts from Varel have just introduced a new mobile test unit for dynamic performance. WindGuard Certification offers manufacturers not only the certification of prototypes, but also all measurements necessary to obtain the required proofs according to VDE-AR-N 4105, VDE-AR-N 4110, VDE-AR-N 4120 and IEC 61400-21-1.

The new test unit allows fault-ride-through (FRT) test procedures to verify dynamic grid support according to applicable guidelines such as FGW TR3, IEC61400-21-1 and the latest revision of DIN VDE V 0124-100 published in June 2020. This test standard requires a proof of grid stabilizing abilities even on smaller power generating units intended to be connected to the low-voltage grid. "Thanks to the compact design of our new mobile test equipment, we can now conduct the required dynamic performance tests directly at the customer's site or at the location of his prototype", says Damian Slowinski, head of testing laboratory at WindGuard Certification. "Our FRT test system simulates fault conditions in the public grid. Using the recorded measurement data, we check whether the power generating unit reacts as required and if it returns to normal operation after fault clearance without disconnecting from the grid." The unit allows the configuration of a wide range of fault conditions – for example, the undervoltage drop depth and the overvoltage excess are variably adjustable. Even two-phase faults are possible.

"Thanks to our mobile testing service, our customers gain notable time and cost advantages," Damian Slowinski adds, "it is no longer necessary to transport the test object to a stationary test laboratory. In addition, during development of the new test unit, we paid particular attention to ensuring a quick configuration and execution of individual tests. Furthermore, the new evaluation software developed by WindGuard Certification provides real-time feedback. Finally, the entire dynamic performance tests can be completed in just a few days.

The new mobile test unit allows verifying the dynamic performance ability of power generating units up to a nominal capacity of 1 MW in accordance with all current guidelines and standards.



Photo:

WindGuard Certification's new mobile test unit for dynamic performance

Caption:

“During development and construction of our new mobile dynamic performance test unit, the implementation of quick and easy configuration options was of crucial importance,” says Jens Horstmann, test engineer at WindGuard Certification. He prepares the system for the next test, which requires just a few simple actions.

Photo: WindGuard Certification

About WindGuard Certification

WindGuard Certification is a certification body for wind turbines and other renewable energies. It prepares type certificates for onshore and offshore wind turbines and their components, prepares certificates for continued operation and develops solutions for all issues relating to the grid stability of energy systems. Included are unit and plant certificates, as well as calculations to energy injection management. To date, around 340 certificates for a total connected effective power of 2700 MW have been issued. Furthermore, the BSH recognizes WindGuard Certification for offshore certification. In addition to the certification body accredited by DIN EN ISO/IEC 17065, WindGuard Certification operates an accredited test laboratory in accordance with DIN EN ISO / IEC 17025. Accredited are the measurements according to FGW TR 3, IEC 61400-21-1, Measnet, VDE 0214-100 and DIN EN 61000-4-30 and CEI 0-16.

Publication and redistribution free of charge; a copy exemplar to WindGuard Certification is kindly requested. For more information, please visit our website www.windguard-certification.com.

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