

Press Release

Deutsche WindGuard discovers gaps in anemometer classification

Systematic research on anemometer behavior under realistic operating conditions shows necessity for amendment in IEC standard

Varel, 25th April 2018: In a recently published white paper, consultant Deutsche WindGuard discloses the need for amending and specifying the basics for anemometer classification defined in IEC 61400-12-1.

To date it is custom to classify anemometers under the atmospheric ambient conditions of the lab. This does not take into account the operating conditions, especially with regards to air pressure and temperature. Experiments by Deutsche WindGuard now show that ambient conditions have a much higher influence on the behavior of sensors than previously assumed.

„As we have extensive experience with the classification of anemometers, we have been aware for some time that the assumptions of the IEC with regards to temperature and air pressure influence were simplified. However, there was no possibility to provide experimental evidence as there was no wind tunnel to recreate these conditions”, explains Dieter Westermann, managing director of Deutsche WindGuard Wind Tunnel Services GmbH, “Therefore we built a special pressurized wind tunnel for anemometer classification. In this wind tunnel, we can simulate temperatures ranging from -20° to +40°C and air pressure from 600 hPa to 1.100 hPa. This enables us to reproduce ambient conditions of wind energy sites from the Sahara desert to mountains in the Andes in our lab here in Varel.”

The first measurement campaign clearly indicates: the assumptions that build the basis for anemometer classification according to IEC 61400-12-1 are not complete. Detailed results can be found in the publication “Anemometer calibration at different air temperatures and air pressures” on the WindGuard website. In the following months, WindGuard – in cooperation with anemometer manufacturers – will conduct further systematic research on staple anemometer types.

Publication and reprinting free of charge; it is politely requested that a specimen copy be sent to Deutsche WindGuard GmbH. For further information, please see: www.windguard.com or www.windtunnelcentre.com

Deutsche WindGuard Wind Tunnel Services GmbH

Deutsche WindGuard Wind Tunnel Services offers highest precision for wind sensor calibration and development. As an accredited calibration laboratory, Deutsche WindGuard Wind Tunnel Services GmbH is accepted by MEASNET and IECRE. Deutsche WindGuard Wind Tunnel Services GmbH is a part of Deutsche WindGuard Company Group. With four calibration wind tunnels, a variable density wind tunnel, a climatic wind tunnel, and the acoustically optimized large wind tunnel, Deutsche WindGuard Wind Tunnel Centre offers ideal conditions for measuring, testing and R&D.

In a complex energy market, Deutsche WindGuard is committed to providing extensive scientific, technical, and operational services, which are unbiased and manufacturer-independent. Deutsche WindGuard was founded in 2000. With the headquarters in Varel and subsidiaries in Germany, the United States and China, it employs more than 170 experienced experts.

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