Deutsche Akkreditierungsstelle GmbH

Annex to the Accreditation Certificate D-PL-20107-01-00 according to DIN EN ISO/IEC 17025:2018

Valid from: 07.02.2020

Date of issue: 07.02.2020

Holder of certificate:

SOWITEC development GmbH
Löherstraße 24, 72820 Sonnenbühl

Tests in the fields:

Performance, evaluation and analysis of wind measurements with remote sensing (SoDAR and LiDAR) and wind met mast /meteorological measuring systems; Determination of the wind potential and calculation of the expected mean annual energy yield of wind turbine sites; Determination of the site quality; Determination of the turbulence intensity and IEC site classification; Prediction of the sound immission of wind turbines; Calculation of the shadow impact of wind turbines; Performance, evaluation and analysis of global irradiance measurements for the determination of the solar irradiance potential; Determination of the irradiance potential and production estimate for PV plants

Within the scope of accreditation marked with *, the testing laboratory is permitted, without being required to inform and obtain prior approval from DAkkS, to use standards or equivalent testing methods listed here with different issue dates.
The testing laboratory maintains a current list of all testing standards within the flexible scope of accreditation.

This document is a translation. The definitive version is the original German annex to the accreditation certificate.

Abbreviations used: see last page

The certificate together with its annex reflects the status at the time of the date of issue. The current status of the scope of accreditation can be found in the database of accredited bodies of Deutsche Akkreditierungsstelle GmbH. https://www.dakks.de/en/content/accredited-bodies-dakks

1. Performance, evaluation and analysis of wind measurements for the determination of the wind potential with SoDAR, LiDAR and wind met mast /meteorological measuring systems

IEC 61400* 2019-02	Wind turbines – Part 1: Design requirements
IEC 61400-12-1* 2017-03	Wind turbines – part 12-1: Power performance measurements of electricity producing wind turbines
FGW TG 6, Rev. 10* 2017-10	Determination of the Wind Potential and Energy Yields
HV_WRM_RS 2016-07	Performance of remote sensing wind measurements
HV_WRM_MM 2015-12	Performance of wind measurements with wind met mast / meteorological measuring systems
HV_WRA_RS 2015-12	Evaluation and analysis of remote sensing wind measurements for the determination of the wind potential /remote power measurements
HV_WRA_MM 2015-12	Evaluation and analysis of wind measurements with wind met mast for the determination of the wind potential / meteorological measuring systems

2. Determination of the wind potential of wind turbine sites and calculation of the expected mean annual energy yield of wind turbines; Determination of the site quality

IEC 61400-1* 2019-02	Wind turbines – Part 1: Design requirements
IEC 61400-12-1 2017-03	Wind turbines – part 12-1: Power performance measurements of electricity producing wind turbines
FGW TG 6, Rev. 10* 2017-10	Determination of the Wind Potential and Energy Yields
HV_WRP 2015-12	Determination of the wind potential of wind turbine sites
HV_AEP_WIND 2016-09	Calculation of the expected mean annual energy yield of wind turbines

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3. Determination of the turbulence intensity by means of measurement and IEC site classification

IEC 61400-1* 2019-02	Wind turbines – Part 1: Design requirements
HV_TIA 2016-05	Calculation of turbulence intensities

4. Prediction of the sound immission of wind turbines

DIN ISO 9613-2* 1999-10	Acoustics – Attenuation of sound during propagation outdoors – Part 2: General method of calculation
TA Lärm 1998-08	Sechste allgemeine Verwaltungsvorschrift zum Bundes–Immissionsschutzgesetz: Technische Anleitung zum Schutz gegen Lärm
HV_NIA 2015-12	Calculation of the sound immission of wind turbines

5. Calculation of the shadow impact of wind turbines

HV_SFA 2015-12	Calculation of the shadow impact of wind turbines
LAI 2002-03	Hinweis zur Ermittlung und Beurteilung der optischen Immission von Windenergieanlagen

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6. Performance, evaluation and analysis of global irradiance measurements for the determination of the solar irradiance potential

IEC 61724-1* 2017-03	Photovoltaic system performance - Part 1: Monitoring
VDI 3786 Bl. 1* 2013-08	Environmental Meteorology – Meteorological Measurements – Principles
VDI 3786 Bl. 5* 2015-10	Environmental Meteorology – Meteorological Measurements – Irradiation
WMO-No. 8 ed. 7* 2008	Guide to Meteorological Instruments and Methods of Observation
HV_SRM 2015-12	Performance of global irradiance measurements
HV_SRA 2015-12	Evaluation and analysis of global irradiance measurements for the determination of the solar irradiance potential

7. Determination of the irradiance potential and production estimate for PV plants

HV_AEP_PV 2015-12	Determination of the solar irradiance potential and production estimate for PV plants

Abbreviations used:

DIN	German Institute for Standardization
FGW	Fördergesellschaft Windenergie e.V.
HV_xxx	In house method of SOWITEC development GmbH
IEC	International Electrotechnical Commission
LAI	Bund/Länder-Arbeitsgemeinschaft für Immissionsschutz
LiDAR	Light Detection And Ranging
SoDAR	Sound/Sonic Detecting And Ranging
TA	Technical Instruction
TG	Technical Guideline
VDI	Association of German Engineers
WMO	World Meteorological Organization

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