Deutsche Akkreditierungsstelle

Annex to the Accreditation Certificate D-PL-17580-01-00 according to DIN EN ISO/IEC 17025:2018

Valid from: **27.07.2023**

Date of issue: 27.07.2023

Holder of accreditation certificate:

anemos Gesellschaft für Umweltmeteorologie mbH
Böhmsholzer Weg 3, 21391 Reppenstedt

The testing laboratory meets the minimal requirements of DIN EN ISO/IEC 17025:2018 and, if applicable, additional legal and normative requirements, including those in relevant sectoral schemes, in order to carry out the conformity assessment activities listed below.
The management system requirements of DIN EN ISO/IEC 17025 are written in the language relevant to the operations of testing laboratories and confirm generally with the principles of DIN EN ISO 9001.

Determination of the wind potential and energy yield of wind turbine sites; Performance, evaluation and analysis of wind measurements with anemometers, SoDAR and LiDAR remote sensing devices; Determination of the site quality at commissioning; Determination of the site quality following commissioning; Calculation of the turbulence intensity; Calculation of the shadow impact of wind turbines; Estimation of the sound immission of wind turbines; Compilation of wind atlases and determination of the wind and energy yield indices; Preparation of revenue reports; Calculation of market value atlases

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 standard 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.

1 Determination of the wind potential and energy yield of wind turbine sites; Performance, evaluation and analysis of wind measurements with anemometers, SoDAR and LiDAR remote sensing devices; Determination of the site quality at commissioning

FGW TG6, Rev.11 * 2020-09	Determination of wind potential and energy yields
IEC 61400-1 * 2019-02	Wind energy generation systems - Part 1: Design requirements
IEC 61400-12-1 Ed. 2.0 * 2017-03	Wind energy generation systems – Part 12-1: Power performance measurements of electricity producing wind turbines (*withdrawn standard*)
IEC 61400-12-1 * 2022-09	Power performance measurements of electricity producing wind turbines
IEC 61400-50 * 2022-08	Wind measurement – Overview
IEC 61400-50-1 * 2022-11	Wind measurement – Application of meteorological mast, nacelle and spinner mounted instruments
IEC 61400-50-2 * 2022-08	Wind measurement – Application of ground-mounted remote sensing technology
AA Wind- und Ertragsgutachten, Rev.00 2023-02	Preparation of wind- and energy yield assessments
AA Windmessungen-Auswertung, Rev.00 2023-03	Evaluation and analysis of wind measurements

2 Determination of the site quality following commissioning

FGW, TG10, Rev. 02 * 2021-03	Determination of the site quality following commissioning
AA SGnI, Rev. 01 2022-10	Determination of the site quality following commissioning

3 Calculation of the turbulence intensity

AA Turbulenzintensität Rev.14 2023-02	Calculation of the natural ambient turbulence intensity

4 Calculation of the shadow impact of wind turbines

LAI 2020-01	Hinweise zur Ermittlung und Beurteilung der optischen Immissionen von Windkraftanlagen Aktualisierung 2019 (WKA-Schattenwurf-Hinweise)
AA Schatten Rev.10 2023-02	Shadow flicker impact report

5 Estimation 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
LAI 2005-03	Hinweise zum Schallimmissionsschutz bei Windenergieanlagen Länderausschuss für Immissionsschutz (LAI)
LAI 2016-06	Hinweise zum Schallimmissionsschutz bei Windkraftanlagen (WKA) Bund/Länder-Arbeitsgemeinschaft Immissionsschutz (LAI)

6 Compilation of wind atlases and determination of the wind and energy yield indices

AA anemos Windatlanten, Rev.06 2023-02	Calculation of the anemos wind atlases
AA anemos Wind- und Ertragsindex Rev.08 2023-02	Calculation of the anemos wind- and energy yield indices

7 Preparation of revenue reports

AA Erlösgutachten Rev.07 2023-05	Preparation of revenue reports

8 Calculation of market value atlases

AA Marktwertatlas Rev.05 2023-02	Calculation of market value atlases

Abbreviations used:

AA	In-house method of anemos Gesellschaft für Umweltmeteorologie mbH
FGW	Fördergesellschaft Windenergie und andere Dezentrale Energien e.V. (Federation of Wind and other Decentralised Energies)
IEC	International Electrotechnical Commission
LiDAR	Light detection and ranging
SGnI	Site quality following commissioning (Standortgüte nach Inbetriebnahme)
SoDAR	Sonic detection and ranging
TG	Technical Guideline
WEA	Wind turbines