

# Deutsche Akkreditierungsstelle GmbH

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

**Valid from: 07.01.2019**

Date of issue: 07.01.2019

Holder of certificate:

**anemos Gesellschaft für Umweltmeteorologie mbH  
Böhmsholzer Weg 3, 21391 Reppenstedt**

Tests in the fields:

**Determination of the wind potential and energy yield of wind turbine sites; Calculation of the expected mean annual energy yield; Determination of the site quality at commissioning; Performance, evaluation and analysis of wind measurements with anemometers, SoDAR and LiDAR remote sensing devices; Calculation of the turbulence intensity; Calculation of the shadow impact of wind turbines; Prediction 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.**

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 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 TR 6 *<br>2017-10                             | Determination of wind potential and energy yields<br><br><b>with reference to:</b><br>EEG 2017 German Renewable Act |
| IEC 61400-12-1 *<br>2017-03                       | Wind turbines - Part 12-1: Power performance measurements of electricity producing wind turbines                    |
| IEC 61400-1 *<br>2005-08                          | Wind turbines - Part 1 Design requirements                                                                          |
| AA WAsP<br>Rev. 12, 2018-10                       | Determination of WAsP reports                                                                                       |
| AA Meteodyn_WT<br>Rev. 07, 2018-10                | Determination of Meteodyn WT reports                                                                                |
| AA SoDAR-LIDAR-<br>Auswertung<br>Rev. 07, 2018-10 | Evaluation and analysis of SoDAR- and LIDAR-measurements                                                            |

**2 Calculation of the turbulence intensity**

|                                           |                                                 |
|-------------------------------------------|-------------------------------------------------|
| AA Turbulenzintensität<br>Rev 13, 2018-10 | Calculation of the natural turbulence intensity |
|-------------------------------------------|-------------------------------------------------|

**3 Determination of the shadow impact of wind turbines**

|                                 |                                                                                                                    |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------|
| LAI<br>2002-03                  | Hinweise zur Ermittlung und Beurteilung der optischen Immission von Windenergieanlagen (WEA-Schattenwurf-Hinweise) |
| AA Schatten<br>Rev. 07, 2017-01 | Calculation of the extent of shadow flicker of wind turbines                                                       |

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**4 Estimation of the sound immission of wind turbines**

|                             |                                                                                                                             |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| DIN ISO 9613-2 *<br>1999-10 | Acoustics - Attenuation of sound during propagation outdoors -<br>Part 2: General method of calculation                     |
| LAI<br>2005-03              | Hinweise zum Schallimmissionsschutz bei Windenergieanlagen<br>Länderausschuss für Immissionsschutz (LAI)                    |
| LAI<br>2016-06              | Hinweise zum Schallimmissionsschutz bei Windkraftanlagen<br>(WKA)<br>Bund/Länder-Arbeitsgemeinschaft Immissionsschutz (LAI) |

**5 Compilation of wind atlases and determination of wind- and energy yield indices**

|                                                        |                                                          |
|--------------------------------------------------------|----------------------------------------------------------|
| AA anemos Windatlas MM5<br>Rev.07, 2018-10             | Calculation of the anemos wind atlases (MM5)             |
| AA anemos Windatlas WRF<br>Rev.05, 2018-10             | Calculation of the anemos wind atlases (WRF)             |
| AA anemos Wind- und<br>Ertragsindex<br>Rev.06, 2018-10 | Calculation of the anemos wind- and energy yield indices |

**6 Revenue Reports**

|                                      |                                |
|--------------------------------------|--------------------------------|
| AA Erlösgutachten<br>Rev.04, 2018-10 | Preparation of revenue reports |
|--------------------------------------|--------------------------------|

**7 Market value atlases**

|                                         |                                     |
|-----------------------------------------|-------------------------------------|
| AA Marktwertatlanten<br>Rev.04, 2018-10 | Calculation of market value atlases |
|-----------------------------------------|-------------------------------------|

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**Abbreviations used:**

|      |                                                                   |
|------|-------------------------------------------------------------------|
| AA   | In-house method of anemos Gesellschaft für Umweltmeteorologie mbH |
| BWE  | Federal Wind Energy Association                                   |
| DIN  | German Institute for Standardization                              |
| FGW  | Federation of German Windpower and other Renewable Energies       |
| TR   | Technical guideline                                               |
| WASP | Wind atlas Analysis and Application Program                       |

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