Deutsche Akkreditierungsstelle GmbH

Annex to the Accreditation Certificate D-ZE-17195-01-00 according to DIN EN ISO/IEC 17065:2013

Valid from: **21.07.2022**

Date of issue: 21.07.2022

Holder of certificate:

WindGuard Certification GmbH
Oldenburger Straße 65, 26316 Varel

Certifications of products, processes and services in the fields:

Grid integration and grid connection properties of generating units (PGU) and power generating plants (PGP) of renewable energies, as well as the preparation of a proof of conformity for transition and new plants; Type and project certification of onshore and offshore wind turbines and their components as well as small and micro wind turbines; condition monitoring systems of onshore and offshore wind turbines, continued operation of wind turbines

Without previous information and agreement of the DAkkS - the certification body is allowed to use within the accreditation fields marked with * different revisions of the herewith specified Certification
Programs / Requirements Document.
The certification body maintains a current list of all Certification Schemes / Requirements Document within the flexible scope of accreditation.

The management system requirements of DIN EN ISO/IEC 17065 are written in the language relevant to the operations of bodies certifying products. Certification bodies that conform to the requirements of this standard, operate generally in accordance with the principles of DIN EN ISO 9001.

The certificate together with the annex reflects the status as indicated by the date of issue.
The current status of any given scope of accreditation can be found in the directory of accredited bodies maintained by Deutsche Akkreditierungsstelle GmbH at https://www.dakks.de/en/content/accredited-bodies-dakks.

Abbreviations used: see last page

1 Grid integration and grid connection properties of power generating units (PGU) and power generating plants (PGP)

FGW TR8, Rev. 9 2019-02	Certification of the Electrical Characteristics of Power Generating Units, Systems and Storage Systems as well as for their Components to the Grid	*

In conjunction with the above mentioned certification programs:

IEC 61400-21 Ed. 2 2008-08	Wind turbines - Part 21: Measurement and assessment of power quality characteristics of grid connected wind turbines	*
12/X/STD(CONN)/GM/CEA 2019-02	Central Electricity Authority (Technical Standards of Connectivity) Amendment	*
CEI 0-16 Rev. 3 2014-12	Reference technical rules for the connection of active and passive consumers to the HV and MV electrical networks of distribution Company	*
DIN EN 50160 2011-02	Voltage characteristics of electricity supplied by public distribution networks	*
DIN VDE V 0124-100 2012-07	Grid integration of generator plants - Low voltage – Test requirements for generator units to be connected to and operated in parallel with low-voltage distribution networks	*
BDEW MSR 2011-02	Technical Guideline "Generating plants to the medium-voltage network" Guideline for generating plants' connection to and parallel operation with the medium-voltage network; Status: June 2008 edition; with additions by the FNN Spring 2009 Ed.: BDEW and with 2nd supplement of July 2010 and 3rd supplement	*
FGW TR3, Rev. 24 2016-03	Determination of electrical characteristic of power generating units and systems connected on the medium, high and extra-high voltage grids	*
FGW TR4, Rev. 8 2016-03	Demands on Modelling and Validating Simulation Models of the Electrical characteristics of Power Generating Units and Systems, Storage Systems as well as for their Components	*
FNN, VDE 2010-02	Set of specifications for directional reactive power and under-voltage protection, Issue February 2010	*

SDLWindV 2009-07	Ordinance on System services by wind energy plants (Systemdienstleistungsverordnung- SDLWindV); As of July 3, 2009, Federal Law Gazette 2009, Part I No. 39, Ed.: BMU	
Transmission Code 2007-08	Transmission Code 2007; Status: August 2007, Ed.:VDN	*
VDNDirective 2003	VDN Guideline for Digital Protection Systems, 1st edition 2003, VDN Association of system Operators VDN e.V. at the VDEW	*
VDE-AE-N 4120 2015-01	Technical requirements for the connection and operation of customer installations to the high voltage network (TAR high voltage)	*
VDE-AR-N 4105 2011-08	Generators connected to the low-voltage distribution network Technical requirements for the connection to and parallel operation with low-voltage distribution networks	*
VDE-AR-N 4110 2018-11	Technical requirements for the connection and operation of customer installations to the medium voltage network (TAR medium voltage)	*

2 Type and project certification of onshore and offshore wind turbines and their components as well as small wind turbines

IEC-WT-01 2001-04	System for Conformity Testing and Certification of Wind turbines: Rules and Procedures *(withdrawn standard)*	*
IEC 61400-22 Ed.1 2010-05	Wind turbines - Part 22: Conformity testing and certification *(withdrawn standard)*	*
IS/IEC 61400-22 2010	Wind turbines - Part 22: Conformity testing and certification	
IECRE OD-502 Ed. 1.0 2018-10	IECRE Operational Document – Project Certification Scheme	*
IECRE OD-501 Ed. 2.0 2018-05	IECRE Operational Document – Type and Component Certification Scheme	*
DNVGL-SE-0441 2016-06	Type and component certification of wind turbines	*

DNVGL-SE-0190 2015-12	Project certification of wind power plants	*
DNVGL-SE-0073 2014-12	Project certification of wind farms according to IEC 61400-22	*
DNVGL-SE-0436 2016-03	Shop Approval in renewable energy	
Danish Energy Agency/ Energistyrelsen 2013-01	Bekendtgørelse number 73, "Bekendtgørelse om teknisk certificeringsordning for vindmøller" (Decree on a technical certification scheme for wind turbines)	*
GL-IV-1 2003/Erg. 2004 2010	Germanischer Lloyd Rules and Guidelines-IV- Industrial Services: Part 1 - Guideline for the Certification of Wind Turbines	*
GL-IV-2 2005 2012	Germanischer Lloyd Rules and Guidelines-IV-Industrial Services: Part 2 - Guideline for the Certification of Offshore Wind turbines	*
BSH Standard 7005 Design 2015-12	Minimum requirements concerning the constructive design of offshore structures within the Exclusive Economic Zone (EEZ)	
MCS 006, Issue 1.5 2009-07	Product Certification Scheme Requirements: Micro and Small Wind turbines, DECC (Department of Energy and Climate Change), UK. (Product certification requirements: small and micro wind turbines, DECC, UK 2009)	
MCS 010, Issue 1.5 2009-02	Product Certification Scheme Requirements: Factory Production Control Requirements DECC UK. (Product Certification Requirements: Requirements for Inspections of Manufacturing Facilities, DECC, UK 2008)	
MCS 011, Issue 1.4 2009-01	Product Certification Scheme Requirements: Acceptance Criteria for Testing Required for Product Certification, DECC, UK 2008	

In conjunction with the above mentioned certification programs:

IEC 61400-1 2005-08 Ed 3.0	Wind turbines- Part 1: Safety Requirements	*
IEC 61400-1-am1 2010-10 Ed. 3.0	Amendment 1 - Wind turbines - Part 1: Design requirements	*

IEC 61400-2 2013-12 Ed. 3.0	Wind turbines – Part 2: small wind turbines	*
IEC 61400-3 2009-02 Ed. 1.0	Wind turbines - Part 3: Design requirements for offshore wind turbines	*
IEC 61400-4 2012-12 Ed. 1.0	Wind turbines – Part 4: Design requirements for wind turbine gearboxes	*
IEC 61400-24 2010-06 Ed. 1.0	Wind turbines- Part 24: Lightning protection	*
GL Wind Technical Note 067 2013, Revision 5	Certification of wind turbines for extreme temperature (here: cold climate)	*
DNV-OS-J101 2013-01	Design of Offshore Wind turbine Structures	*
DIN EN 50308 VDE 0127-100 2005-03 Corrigendum 1 2008-12	Wind turbines- Protective measures – Requirements for construction, operation and maintenance	*
DIBt 2012	German institute for structural engineering: Guideline for wind turbines, impacts and proof of structural integrity for tower and foundation. Schriften des Deutschen Instituts für Bautechnik, Reihe B, Heft 8	

3 Certification of condition monitoring systems of onshore and offshore wind turbines *

DNV GL SE 0439 2016-06	Certification of condition monitoring systems of onshore and offshore wind turbines
GL-IV-4 2013	Germanischer Lloyd Rules and Guidelines-IV-Industrial Services: Part 4: Guideline for the Certification of Condition Monitoring Systems for Wind turbines

4 Certification of the continued operation of wind turbines *

DNV GL SE 263 2016-03	Certification of lifetime extension of wind turbines
GL-IV-1, Chapter 12 2009	Germanischer Lloyd Regulations and Directives-IV-Industrial services: Part 1, Chapter 12 - Guideline for the continued operation of wind turbines

In conjunction with the above mentioned certification programs:

DNV GL ST 262 2016-03	Lifetime extension of wind turbines	*
DIBt 2012	German institute for structural engineering: Guideline for wind turbines, impacts and proof of structural integrity for tower and foundation. Schriften des Deutschen Instituts für Bautechnik, Reihe B, Heft 8	

Abbreviations used:

BDEW MSR	Bundesverband der Energie- und Wasserwirtschaft - Mittelspannungsrichtlinie / Federal Association of the German Energy and Water Industries - medium voltage directive
BNetzA	Bundesnetzagentur / Federal Grid Agency
CEI	Comitato Elettrotecnico Italiano / Italian Electrotechnical Committee
DECC	Department of Energy and Climate Change
DIBt	Deutsches Institut für Bautechnik
DNV	Det Norske Veritas
Ed.	Edition
FGW TR	Richtlinie der Fördergesellschaft Windenergie und andere Erneuerbare Energien / Promotional organisation of wind energy and other renewable energies
FNN	Forum Network Technology/Grid Operation in VDE
GL	Germanischer Lloyd
IEC	International Electrotechnical Commission
IS/IEC	Indian Standard
TS	Technical specification
VDE	Verband der Elektrotechnik Elektronik Informationstechnik / Registered Association of the Electrical, Electronic and Information Technology
VDN	Verband der Netzbetreiber / Association of German Grid Operators