

TYPE CERTIFICATE

Certificate No.:
TC-DNVGL-SE-0439-03577-0

Issued:
2018-01-27

Valid until:
2020-01-26

Issued for:

Ice Detection System IDD.Blade

Specified in Annex 1

Issued to:

Wölfel Wind Systems GmbH

Max-Planck-Str. 15
97204 Höchberg, Germany

According to:

DNVGL-SE-0439:2016-06 Certification of condition monitoring

Based on the documents:

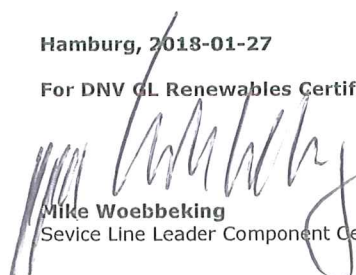
CR-DNVGL-SE-0439-03577-0

Certification Report Ice Detection System IDD.Blade,
dated 2018-01-27

Changes of the system design, the production or the manufacturer's quality system are to be approved
by DNV GL.

Hamburg, 2018-01-27

For DNV GL Renewables Certification

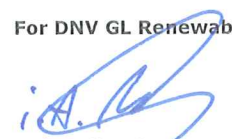

Mike Woebeking
Service Line Leader Component Certification



By DAKKS according DIN EN IEC/ISO 17065
accredited Certification Body for products. The
accreditation is valid for the fields of certification
listed in the certificate.

Hamburg, 2018-01-27

For DNV GL Renewables Certification


Robert Kasch
Senior Project Manager

TYPE CERTIFICATE - ANNEX 1

Certificate No.: TC-DNVGL-SE-0439-03577-0

Page 2 of 2

General

System name IDD.Blade
Manufacturer Wölfel Wind Systems GmbH

Hardware

Name Structural Noise Sensor SNS, Data Acquisition Unit
 DAU, Data Processing Unit DPU
Data sheet Produktspezifikation IDD.Blade

SHMB-02-PS-IDD, Rev. 1

No. of sensors per
blade

 ≥ 1 **Software**

Name SHMB

Vers. 02

Manuals

Inbetriebnahmeanleitung

Montage- und Wartungsanleitung

SHMB-02-Anleitung
Inbetriebnahme, Rev. 8
SHMB-02 Anleitung Montage
Wartung, Rev. 6

Interfaces

Rotor blade

Robkas