



Certificate No.

IECRE.WE.CC.19.0013-R0

IECRE - IEC System for Certification
to Standards Relating to Equipment
for Use in Renewable Energy
Applications

COMPONENT CERTIFICATE

Rotor Blade

This certificate is issued to

Sino-wind Energy Group Ltd.
21-1 Beigongda Software Park, No.1, Disheng North Street, BDA,
Beijing
P.R.China

for the component

Rotor Blade SW64

wind turbine class (class, standard, year)

S, IEC 61400-1: 2005

This certificate attests compliance with IEC 61400 Series as specified in subsequent pages. It is based on the following reference documents:

Design basis evaluation conformity statement
Dated

CGCSZ201746131062-01
2019-07-23

Design evaluation conformity statement
Dated

CGCSP201746131062-01
2019-07-23

Type test conformity statement
Dated

CGCXS201746131062-01
2019-07-23

Manufacturing conformity statement
Dated

CGCGS201746131062-01
2019-07-23

Final evaluation report
Dated

CGCTC201746131062-01
2019-07-23

The conformity evaluation was carried out in accordance with the rules and procedures of the IECRE System
www.iecre.org

The component specification begins on page 2 of this certificate.

Changes in the system design or the manufacturer's quality system are to be approved by the Certification Body. Without approval, the certificate loses its validity.

This certificate is valid until:
2023-07-22

Approved for issue on behalf of the IECRE
Certification Body:

Qin Haiyan
General Director
Beijing 2019-07-23



Room 1108, Yiheng Building, No.28
North 3rd Ring Road East,
Chaoyang District, Beijing, 100013,
P.R.China



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Machine parameters :

Power regulation:	Pitch shift
Rotor orientation:	Clockwise (facing the blade)
Design life time:	20 years

Other environmental conditions (where taken into account):

Normal and extreme temperature ranges:	-30°C~+40°C / -30°C~+50°C
Lightning protection system (standard and protection class):	I (IEC 61400-24: 2010)

Interfaces:

Design loads for the component:	Load Specification for SW64, No.: SWT-D-01-028-2017, Rev.: 1.1 Dated: 2017.07.04
Interface assumptions, conditions and requirements:	Blade bolt assessment based on generic pitch bearing
Other interface conditions:	See below

**If not otherwise stated, the certificate holder is the manufacturer.

Blade:

Type:	Consists of the shell and the two shear webs.
Material:	Glass fibre reinforced epoxy material in a sandwich construction with core materials.
Blade length:	64±0.06m
Number of blades:	3
Manufacturer:	Sino-wind Energy Group Ltd.
Natural frequency:	1 st Flap: 0.46Hz 1 st Edge: 0.68Hz
Mass:	13950kg±3% (excluding bolts)
Blade root moment:	281511kgm±3% (from root)
Pitch diameter	2300±0.5mm
Blade root connection:	92-M36 (class 10.9)

Manuals:

Operation & maintenance manual, Transport manual, Installation & commissioning manual:	Wind turbine blade installation, operation and maintenance manual for wind turbine blade of SW64
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