



Certificate No:
TAA00003BD

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Window Wipers

with type designation(s)
WGP-ZR

Issued to

Nanjing Southeast Industrial Equipment Corporation
Nanjing, China

is found to comply with

DNV rules for classification – Ships and offshore units

Application :

See page 2.

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.

Issued at **Høvik** on **2023-09-25**

This Certificate is valid until **2028-09-24**.

for **DNV**

DNV local unit: **Nanjing NB & CMC**

Approval Engineer: **Marcin Tobiasz**

Frederik Tore Elter
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Product description

Horizontal window wipers WGP-ZR type, consists of following components:

- WGP-ZR, translation single wiper with motor mounted inside, IP67,
- WGP-ZR-26A, scrapper,
- WGP-ZRP/ C01, wiper controller, IP30.

Application/Limitation

- For marine and offshore applications.
- The window wipers shall be installed in accordance with the manufacturer's document.
- When installed on ships with class notation NAUT(OC)/NAUT(AW)/NAUT(OSV), the window wipers shall comply with minimum coverage and speed/frequency requirements described in the relevant class notation rules.

Type Approval documentation

Test Report No. EM 2017-30 dated 1 August 2017

Test Report No. EM 2023-034 dated 22 June 2022

Test Report No. ER2 017-030 dated 12 September 2017

Test Report No. ER 2023-034 dated 26 June 2023

Noise Test Report dated 11 September 2023

Straight Line Wiper Durability Stage 1 Test Report dated 5 May 2023

Straight Line Wiper Durability Stage 2 Test Report dated 21 May 2023

Scraping speed and wipe quality test report dated 1 August 2022

Wiper control box operating instructions

Function Description

Product technical drawings

Wiper Operating Manual

Tests carried out

- IEC 60945 – Environmental testing [2002]
- ISO 17899 – Marine electric window wipers – First Edition [2004]

Marking of product

The Manufacturer and Type Designation to be applied to the equipment in a clearly visible location. In addition the equipment shall be marked with serial number, safe distance to magnetic compass, power consumption and/or supply voltage.

Periodical assessment

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

The scope of the periodical/renewal assessment is to verify that the production quality conditions stipulated for the type approval are complied with and that no alterations are made to the product design or its components and/or materials without appraisal by the Society.