DNV·GL

Certificate No:
TAA000024C

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Window Wipers

with type designation(s)
Wynn Marine Type C and D MKV wiper mechanisms with Series 8000 Network Control System

Issued to
B. HEPWORTH AND COMPANY LIMITED
REDDITCH, United Kingdom

is found to comply with
DNV GL rules for classification – Ships and offshore units
IMO Res. A.694(17) General requirements for shipborne radio equipment forming part of the global maritime distress and safety system (GMDSS) and for electronic navigational aids

Application :

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

Issued at **Høvik** on **2018-12-27**
This Certificate is valid until **2023-12-26**.
DNV GL local station: **Manchester**

Approval Engineer: **Steinar Kristensen**

for **DNV GL**

Jan Tore Grimsrud
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.

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Product description

Heavy Duty Straight Line Windscreen Wiper Mechanism with Series 8000 Network Control System, Wynn Marine Type C and D MKV including Controller and Keypad, consisting of:

Component	Description	Enviroment
Stright line Wiper Mechanisms	Type C MKV or Type D MKV – IP67	Exposed*
Wiper Motors	3 Phase 115V AC for 8000 Series Controller, PARV81, IP20 or 3 Phase 230V AC for 8000 Series Controller, PARV82, IP20	Protected
Series 8000 Network Control System	8000 Series Module	Protected
	8000 Series 19'' Rack Module	Protected
	8500 Keypad, IP66	Protected

Application/Limitation

- For marine and offshore applications.
- Installation to be performed according to the manufacturers Installation and operation manual.
- When installed on ships with class nautations NAUT- AW, NAUT-OC or NAUT –OSV(A), the window wiper system shall comply with the minimum blade coverage and speed/frequency requirements described in the relevant class notation rules.
- Wiper dimensions:

Stroke (SSSS)	< 4728 mm
Arm (AAAA)	< 1000 mm
Blade (BBBB)	< 1100 mm

*Motor parts for Straight line window wiper Type C shall be mounted in protected area.

Type Approval documentation

			Manual Type C Straight Line Wiper - Inside Motor Series 8000 Network Control System

Tests carried out

- IEC 60945 – Enviromental 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, reference to Type Approval certificate, 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.