EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate no.:
MEDB00008V0

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED). This Certificate is issued by DNV SE based on the notification of the Federal Maritime and Hydrographic Agency of Germany.

This is to certify:

that the Radar equipment CAT 1, CAT 2; approved with a chart option (CAT 1C, CAT 2C)

with type designation(s)
MULTIPILOT Platinum (SharpEye)

issued to
Wärtsilä Voyage GmbH
Hamburg, **Germany**

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2023/1667,**
item No. MED/4.64 SOLAS 74 as amended, Reg. V/18, 19, IMO Res. A.278 (VIII), A.694(17), MSC.191(79), 192(79), 302(87), ITU-R M.1177-4 (04/11)

Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2029-06-09**.

Issued at **Hamburg** on **2024-06-10**

DNV local unit:
Hamburg – CMC North/East

Approval Engineer:
Jörg Rebel

Notified Body
No.: **0098**

for **DNV SE**

Mydlak-Röder, Christine
Head of Notified Body

A U.S. Coast Guard approval number will be assigned to the equipment when the production module has been completed and will appear on the production module certificate (module D, E or F), as allowed by the "Agreement between the European Community and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment", signed February 27th, 2004, and amended by Decision No 1/2023 dated May 26th, 2023.

The mark of conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU.
This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV SE of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled.
Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.

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

A MULTIPILOT Platinum (SharpEye) comprises the following equipment necessary for functioning:

No.	Designation	Type Designation
1	**Transceiver Units**	**One or more units**
	Radar Scanner	as defined in separate certificate*)
	Radar Transceiver	as defined in separate certificate*)
	Turning Units	as defined in separate certificate*)
2	**Main Processing Unit** Display Electronics Platinum (alternatively)	as defined in separate certificate*)
		including Mariner Kit for a) horizontal b) vertical installation as defined in separate certificate*)
3	**Display Units 250mm** (for Radar CAT 2 & ECDIS, alternatively)	as defined in separate certificate*)
4	**Display Units 320mm** (for Radar CAT 1 & ECDIS alternatively)	as defined in separate certificate*)
5	**Operator Units** (alternatively)	as defined in separate certificate*)
6	**Sensor Interfaces** (alternatively)	as defined in separate certificate*)
7	**Network Switches** (alternatively)	as defined in separate certificate*)
8	**Optional Components** (alternatively)	as defined in separate certificate*)

Software:

No.	Designation	Version no.
1	NACOS Platinum application software	2.1.x with x ≥ 26
2	Operating system of Display Electronics	Microsoft Windows 7 SP1 and Microsoft Windows 10 Pro † Microsoft Windows 10 IoT Enterprise LTSC †
3	NACOS Platinum Radar Transceiver application software	2.1.x with x ≥ 02.01 for NG3050 and NG3051 2.1.x with x ≥ 12.01 for NG3061 2.1.x with x ≥ 1.11 for NG3060
4	SharpEye Mark 11 Radar Transceiver application software	ZM-2844 V 1.10

† Version numbers as defined in separate certificate*)

Application/Limitation

- IMO SN.1/Circ.MSC.1/Circ.1503: ECDIS that is not updated for the latest version of IMO Standards may not meet the chart carriage requirements as set out in SOLAS regulation V/19.2.1.4.
- Chart data formats: as defined in separate certificate*)
- System interfaces (undisturbed operation): as defined in separate certificate*)
- Backup arrangements (ECDIS): as defined in separate certificate*)

*) The Type Approval certificate TAA00003DH for NACOS Platinum (SharpEye) system platforms in its latest revision at the date of placing the system on the market is part of this certificate, for the relevant revision see also https://approvalfinder.dnv.com/.

Tests carried out

- Environmental and EMC testing: IEC 60945 (2002) incl. Corrigendum 1 (2008)
- Interface testing: IEC 61162-1 (2016), IEC 61162-2 (1998) and IEC 61162-450 (2018)
- Presentation testing: IEC 62288 (2021)
- Bridge alert management testing: IEC 62923-1 (2018) and IEC 62923-2 (2018)
- Performance testing: IEC 62388 Ed.2 (2013)

Type Examination documentation

DNV No	Document ID	Rev.	Description
13	ANC-D-0000-0228	36A	Manual: Platform TCP-IP Addresses and Ports
12	390 008 502	14 (2022-11)	Technical Manual Integration Manager
11	390 008 521	V01-2210	Technical Manual NACOS Platinum - Network (Training & Installation)
9	390 008 724	16 (2024-03)	Installation Guide NACOS Platinum
8	KH-1605-1	6 (2021-12)	Installation and Commissioning MK11 Turning Unit
7	901 201 677	17 (2024-05)	Technical Manual Components for Platinum MULTIPILOT (SharpEye)
5	390 008 516	33 (2024-01)	Technical Manual Multi Function Display MFD
4	390 008 504	27 (2023-01)	Technical Manual NACOS Platinum - IEC 61162-1/-2 Interface
3	PAAG407215	53 (2024-05)	Operating Instructions NACOS Platinum Naval Navigation
2	ANC-D-0000-0147	01C	List of performance test reports for NACOS Platinum (SharpEye)
1	TAA00003DH	Latest rev.	Certificate: DNV, NACOS Platinum (SharpEye) system platforms

Marking of product

According to IEC 60945, Sect.4.9:
The product to be marked with following information, where practicable:

- Identification of the manufacturer,
- Equipment type number or model identification under which it was type tested,
- Serial number of the unit,
- Compass safe distance.

Alternatively, the marking may be presented on a display at equipment start-up, and in case of fixed equipment compass safe distance may be given in the equipment manual.

END OF CERTIFICATE