DNV·GL

Certificate No:
TAA000012B

TYPE EXAMINATION CERTIFICATE

This is to certify:

That the Electronic Chart and Display System (ECDIS)

with type designation(s)
NACOS Platinum MULTIPILOT N with WECDIS

Issued to
Wärtsilä SAM Electronics GmbH
Hamburg, Germany

is found to comply with
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
IMO HSC Code (2000)
MSC.191(79) Performance standards for presentation of navigation-related information on shipborne navigational displays
IMO Resolution MSC.232(82) Performance standards for Electronic Chart Display and Information Systems (ECDIS)

Application :

The product approved by this certificate fulfills the requirements according to STANAG 4564 Ed.2 and STANAG 7170 Ed.2.

Issued at **Hamburg** on **2017-02-09**
This Certificate is valid until **2019-02-08**.
DNV GL local station: **Hamburg**

Approval Engineer: **Jörg Rebel**

for **DNV GL**

Duy Nam Le
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 Examination Certificate and not to the approval of equipment/systems installed.

© DNV GL 2014. DNV GL and the Horizon Graphic are trademarks of DNV GL AS.

Product description

A workstation for NACOS Platinum MULTIPILOT N with WECDIS comprises the following equipment necessary for functioning:

Mandatory:
Transceiver units (one or more of the following units):
X-Band Scanner GR3020 with Transceiver NG3050 and Turning Unit GR3050
S-Band Scanner GR3021 with Transceiver NG3051 and Turning Unit GR3051

Main processing unit (alternatively):
Display Electronics Platinum GE 3068 Axxx; xxx = 001, …, 005
Software Version: 2.1.x
including Mariner Kit

- MS 2230 or MS 2270 or MS 2330 or MS 2370 for horizontal installation or
- MS 2240 or MS 2280 or MS 2340 or MS 2380 for vertical installation

Display units 250 mm (for Radar CAT 2 & ECDIS, alternatively):

- Monitor Platinum, 22" TFT-CCFL, type AZ 3074 G 040
- Monitor Platinum, 22" TFT-CCFL, type AZ 3074 G 042 (touch)
- Monitor Platinum, 22" TFT-LED, type AZ 3074 G 240
- Monitor Platinum, 22" TFT-LED, type AZ 3074 G 241 (IP 56)
- Monitor Platinum, 22" TFT-LED, type AZ 3074 G 242 (touch)
- Monitor Platinum, 22" TFT-LED, type AZ 3074 G 243 (IP 56, touch)
- Monitor Platinum, 22" TFT-LED, type AZ 3074 G 244 (high bright, IP56, touch)
- Monitor Platinum, 22" TFT-LED, type AZ 3074 G 722

Display units 320 mm (for Radar CAT 1 & ECDIS, alternatively):

- Monitor Platinum, 26" TFT-CCFL, type AZ 3073 G 040
- Monitor Platinum, 26" TFT-CCFL, type AZ 3073 G 042 (touch)
- Monitor Platinum, 26" TFT-LED, type AZ 3073 G 240
- Monitor Platinum, 26" TFT-LED, type AZ 3073 G 242 (touch)
- Monitor Platinum, 26" TFT-LED, type AZ 3073 G 726

Note: 1. AZ3074/73 G 040 to G 244 Monitors for flash mount and limited to primary voltage systems of 230 VAC
2. Touch function of monitors not for use.

Operator units (alternatively):

- Platinum BD 3030 (Trackball & optional RADAR, TRACK, or ASCII control panel)
- ECDIS keyboard NSI KSML92x
- Trackball BD 3014 and optional ASCII keyboard BD 3029 (see Note)
- HP standard optical scroll mouse and optional HP standard keyboard (see Note)

Note: At main workstations a separate dimmable light is required.

Sensor interfaces (alternatively):

- Platinum DCU 2010 (DPU 2010, SIO 2010 and PFM 2200 in one housing)
- Platinum DPU 2010 & SIO 2010 & opt. PFM 2010 for dual power supply
- Platinum DPU 2020

Network switches (alternatively):

- EDS-408A-(T) (SAM) (RJ45 ports) or suffix T added
- EDS-408A-MM-SC-(T) (SAM) (+2x fiber ports) or suffix T added
- EDS-510 (1 GHz)

Additional components:
- Power supply STEP PS/1AC/24DC/1.75
- Power supply QUINT PS/1AC/24DC/10
- DVI Extender VL-66201 (see Note)
- DVI/ USB Extender VL-66203 (see Note)
- DVI Distributor VL-66005

Note: Distance limited by type of CAT-cable: CAT 7 cable up to 40 m, CAT 6 or CAT 5E cable up to 20 m, direct connection only, no couplers or adapters, all cables from same type.

Chart data formats:
The system supports the display and use of digital chart data in the following formats:
- S-52 Ed. 6.1 and Pres. Lib. 4.0 (IHO)
- S-57 Ed.3.1.1 (IHO)
- S-61 Ed 1.0 (IHO)
- S-63 Ed.1.2 (IHO)
- S-64 Ed. 3.0 (IHO)
- ARCS (UKHO) and CM-93/3 (C-Map ENC, C-Map Prof.)

System interfaces (undisturbed operation):
Data exchange with sensors, additional devices and external data receiver via:
At least one DCU 2010 or DPU/SIO 2010 or DPU 2020 with 5(five) serial interfaces for reception and transfer of data from connected sensors according to IEC 61162-1 (Edition 4.0, 2010).

1. for reception of sensor data at least delivered by the following sources:

1.1. for the reception of sensor data from 1(one) up to 3(three)
radio navigation receiver assessed as conform with requirements of Marine Equipment Directive (MED) and marked as defined there, which transmits the following information:
- geographic position, status of geographic position, course and speed over ground

1.2. for the reception of sensor data from a
gyro compass assessed as conform with requirements of Marine Equipment Directive (MED) and marked as defined there, which transmits the following information:
- gyro compass heading

1.3. for the reception of sensor data from a
speed and distance measurement device assessed as conform with the requirements of Marine Equipment Directive (MED) and marked as defined there, which transmits the following information:
- speed over ground, and /or speed through the water

1.4 for the data exchange with up to 1(one) additional Electronic chart display and information system (ECDIS) Type: MULTIPILOT or ECDISPILOT Platinum
via local system area network connection (Ethernet LAN) for route data

Backup arrangements (ECDIS):
In order to continue ships navigation in the case of a primary system failure the following back up arrangements are allowed:
Installation of a secondary system Type: ECDISPILOT Platinum or MULTIPILOT Platinum
with 1 (one) sensor interface DCU 2010 or DPU/SIO 2010 or DPU 2020 with its own independent connection to a position sensor (EPFS) and connected to the primary system via local system area network connection (Ethernet LAN) for exchange of route data.

Application/Limitation
None

Type Examination documentation

Tests carried out
Applicable tests according to STANAG 4564 Ed.2, STANAG 7170 Ed.2, IEC 61174 Ed.4 (2015) , IEC 62288 Ed.2 (2014) and IEC 60945 (2002) including Corrigendum 1 (2008).

Marking of product
- Components are marked with product name and product number as listed in the table above.
- Basic software version is displayed in the system graphical user interface.

Certificate Retention Survey
The scope of the retention survey is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the assessment are:
- Ensure that type examination documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type examined documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type examination given
- Ensuring traceability between manufacturer's product type marking and the type examination certificate

Retention survey is to be performed at least at renewal of this certificate.

END OF CERTIFICATE