

# TYPE APPROVAL CERTIFICATE

**This is to certify:****That the Bridge instrumentation**

with type designation(s)  
**NAVITWIN IV (Type 4994-BA, 4994-BB)**

Issued to

**Northrop Grumman Sperry Marine B.V. - German Branch  
Hamburg, Germany**

is found to comply with

**DNV GL rules for classification – High speed and light craft  
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 Resolution MSC 191(79)  
IMO Resolution MSC.302(87) Performance standards for Bridge Alert Management**

**Application :**

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

**Location classes:**

**Temperature B  
Humidity B  
Vibration A  
EMC B  
Enclosure Required protection according to the Rules to be provided upon installation on  
board**

Issued at **Hamburg** on **2018-10-16**

This Certificate is valid until **2023-10-15**.

DNV GL local station: **Hamburg**

for **DNV GL**

Approval Engineer: **Jörg Rebel**

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**Arne Schaarmann  
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.



## Product description

The heading management system NAVITWIN IV consist of

- NAVITWIN IV Type 4994-BA or 4994-BB
- Switch Over Unit Type 4932
- Bearing Rail Stock No. 55335
- Display with size 84 mm x 63 mm
- Interfaces 9 x RS422 according to IEC 61162-2 (6 x Input, 3 x Output)
- Power supply 24 V DC (18 V to 36 V DC)
- Firmware version 2.x

### Note:

The Heading Management System NAVITWIN IV is a central control and display device for multi-compass systems for the maritime navigation of vessels. The functionality includes heading source functionality compliant with the requirements of DNVGL Rules for Ships Pt.6 Ch.3 with regard to distribution of heading information and the following parts are required for compliance:

- NAVITWIN IV Type 4994-BA or 4994-BB

## Approval conditions

The following documentation of the actual application is to be submitted for approval in each case:

- Reference to this Type Approval Certificate
- System block diagram
- Power supply arrangement (may be part of the System block diagram)

The Type Approval covers hardware listed under Product description.

As long as the units are covered by the Type Approval, a product certificate according to Pt.4 Ch.9 Sec.1 [1.2.3] will not be required. Correct configuration and set up for each delivery to be tested during commissioning after installation.

### Software control

All changes in software are to be recorded as long as the system is in use on board. Documentation of major changes is to be forwarded to DNV GL for evaluation and approval before implemented on board. Certification of modified functionality may be required for the particular vessel.

## Type Approval documentation

### Tests carried out

- Environmental testing: IEC 60945 (2002) incl. Corrigendum 1 (2008)
- Presentation of navigational information: IEC 62288 (2014)

Job Id: **262.1-029843-1**  
Certificate No: **TAA000021C**

### **Marking of product**

The products to be marked with:

- manufacturer name
- model name
- serial number
- power supply ratings

### **Periodical assessment**

The scope of the periodical assessment 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 approved 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 approved 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 approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

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.

END OF CERTIFICATE