

# TYPE APPROVAL CERTIFICATE

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**This is to certify:**

**That the Conning Display**

with type designation(s)  
**Navi-Conning 5000 MFD**

Issued to

**Transas Marine Limited**  
**Cork, Ireland**

is found to comply with  
**DNV GL rules for classification – Ships**

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**Application :**

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

This Certificate is valid until **2021-07-11**.

Issued at **Høvik** on **2016-07-12**

DNV GL local station: **Gothenburg**

Approval Engineer: **Roger Lauritsen**

for **DNV GL**

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**Jan Tore Grimsrud**  
**Head of Section**

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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 Navi-Conning 5000 comprises combinations of the following components:

| Unit                         | Location  |
|------------------------------|-----------|
| - Main Processing Unit       | Protected |
| - Operating and control unit | Protected |
| - Display unit               | Protected |

Hardware modules are described in detail as hardware profile **HW5** in Transas Hardware certificate. See Type examination documentation.

**Software version.** 3.00.xxx

**Operating system:** Windows XP, Windows 7

## Application/Limitation

- For installation onboard ship with NAUT notation shall information about display layout and presented information be submitted for assesement.
- Navi-Conning 5000 include a grounding avoidance function where depth alarm is initiated based on depth from echo sounder. Distance between transducer and keel must be configured in the Navi-Conning 5000.
- The product shall be installed and tested in accordance with installation and operation manual
- Navi-Conning 5000 have been tested in a MFD environment and following Transas functions is found not inferior to the connings functions
  - Navi-Radar 4000
  - Navi-Sailor 4000 ECDIS / Navi-Sailor 4000 ECDIS MFD / Navi-Sailor 4100 ECDIS MFD / AlphaChart-T
  - Transas Wave application
  - Firewall & Antivirus Protector
  - Remote Service Functionality
  - BNWAS 5000 (Bridge Navigational Watch Alarm System)
  - BAM 5000 (Bridge Alert Management)
  - Navi-Conning 4000

## Tests carried out

- Environmental testing, IEC 60945 (2002)
- Serial interface testing, IEC 61162-1 (2010), IEC 61162-2 (1998)
- Performance testing, presentation, IEC 62288 (2014)

Job Id: **262.1-021183-1**  
Certificate No: **TAA0000095**

## Type Approval documentation

| DNV GL No | Doc. Ref,  | Rev.     | Description                                            |
|-----------|------------|----------|--------------------------------------------------------|
| 10        |            |          | NS 4000 MFD, additional tests IEC 61162-1              |
| 8         |            |          | RS6 and DCU IEC61162 compliance test report            |
| 6         |            |          | Test report for NAV-Conning 5000                       |
| 5         |            | 3.00.340 | Manual: MFD Installation Guide Part I                  |
| 2         |            | 3.00.340 | Manual: Multi_Function Display, Functional Description |
| 1         | TAA000007U | 0        | Certificate: Transas Hardware certificate              |

## Marking of product

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

## Periodical assessment

A retention survey is to be performed at least every second year, and upon renewal of this certificate. The scope of the retention/renewal survey 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.