

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Council Directive 96/98/EC of 20 December 1996 on Marine Equipment as amended by directive 2014/93/EU, issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Directorate. This Certificate is issued by DNV GL AS under the authority of the Government of the Kingdom of Norway.

This is to certify:

That the Track control system (TCS)

with type designation(s)
Navi Sailor 4000 TCS

Issued to

Transas Marine Limited
Cork, Ireland

is found to comply with the requirements in the following Regulations/Standards:

Annex A.1, item No. A.1/4.33 and Annex B, Module B in the Directive. SOLAS 74 as amended, Regulation V/18 & V/19, IMO Res A.694(17) and IMO Res MSC. 74(69) & 191(79)

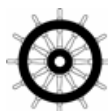
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2021-03-30**.

Issued at **Høvik** on **2016-03-31**

DNV GL local station:
Gothenburg

Approval Engineer:
Roger Lauritsen



Notified Body
No.: **0575**

for **DNV GL AS**

.....
Vidar Dolonen
Head of Notified Body

Product description

	Software
ECDIS: Navi Sailor 4000 ECDIS or Navi Sailor 4000 ECDIS MFD or Navi Sailor 4100 ECDIS MFD or AlphaChart-T	3.00.xxx 3.00.xxx 3.00.xxx 3.00.xxx
Heading Control System (HCS): Raytheon NP5400 , consisting of: - Operator Unit - Autopilot Interface Or, Navis AP4000, consisting of: - APH4000 - CU-M - CU-MPR - IB-TCS-2 Or, Yokogawa PT900, consisting of: - MPH490 Autopilot Control & Display Unit V8225AD Adaptive controller V8225AG Control panel of adaptive - MPH690 Annunciator unit - MPH790 System Selector - MPH791 Mode Selector - MPH291 Main Control Unit Man. Terminal Board CAN Adapter Board - MPT590 NAV I/F Unit	102-890 P0001 E03.xx 102-891 P0001 E01.xx 06.01.xx.yy 05.07.xx.yy 07.07.xx.yy 06.07.xx.yy V8225HV Axx V8225HY Axx V8225DY Axx V8225EU Axx V8225BX Axx V8225FD Axx V8225FU Axx

Application/Limitation

- The installation shall be verified and tested onboard according to manufacturers installation instructions.
- Navi Sailor 4000 TCS complies with the requirements for Category C track control systems (track control along pre-planned straight and through turns).
- The system shall be connected to an alarm transfer system for transfer of back-up navigator alarms.
- The sub-systems (ECDIS and HCS) identified in the product description as well as the heading, speed and positioning sensors being interfaced shall hold a valid type approval certificate.
- Navi Sailor 4000 TCS using Navis AP 4000 and the required additional integration complies to the Track Control system for the DNV GL NAUT (AW) notation.

Job Id:
Certificate No: **MEDB000000ZC**

Tests carried out

- Performance testing, IEC 62065 (2013)
- Environmental testing, IEC 60945 (2002)
- Serial interface testing, IEC 61162-1 (2010)
- Performance testing, presentation, IEC 62288 (2014)
- DNV GL Rules Pt. 6, Ch. 6, Sec 3, 6.11 (using Navis AP4000)

Type Examination documentation

DNV GL No	Rev.	Title
62	3.00.340	Manual: MFD Installation Guide Part II
61	3.00.340	Manual: MFD Installation Guide Part I
60	3.00.340	Manual: MFD Functional Description
59	3.00.340	Manual: MFD Additional Functions
58	18.03.2016	Report: TCS4000 with Yokogawa PT900, Test Report TCS IEC62065 ed2_ROLAUR
57	18.03.2016	Report: TCS4000 with Raytheon, Sperry, Navis Test Report TCS IEC62065 ed2
42	14.05.2013	Report: Track Control System 4000 Test Report (with NP5400 and AP4000)
41	17.04.2103	Report: Track Control System 4000 Test Report (with NP5400 and AP4000)
7		Doc: Previously approved docs in cases 344.1-000763, 344.1-000932 and 262.1-003959

Marking of product

The Manufacturer and Type Designation to be applied to 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.