

**EC-TYPE EXAMINATION
CERTIFICATE (MODULE B)**

Certificate No:
MEDB000002C
Revision No:
2

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED), issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Authority. This Certificate is issued by DNV GL AS under the authority of the Government of Norway.

This is to certify:

That the Track control system (TCS)

with type designation(s)

Multifunctional Display: Navi-Sailor 4000 TCS, or AlphaBridge-T: Navi-Sailor 4000 TCS

Issued to

**Wärtsilä Voyage Ltd
Cork, Ireland**

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

Regulation **(EU) 2018/773,**

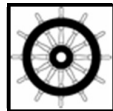
**item No. MED/4.33. SOLAS 74 as amended, Regulations V/18 & V/19, IMO Res A.694(17),
IMO Res MSC.74(69), IMO Res MSC.191(79), IMO Res MSC.302(87)**

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

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

Issued at **Høvik** on **2019-04-08**

DNV GL local station:
Gothenburg



for **DNV GL AS**

Approval Engineer:
Roger Lauritsen

Notified Body
No.: **0575**

Roald Vårheim
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 United States of America and the EEA EFTA states on the mutual recognition of Certificates of Conformity for Marine Equipment" signed 17 October 2005.

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 GL AS 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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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.



Job Id: **344.1-001200-11**
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Product description

ECDIS		
Description	SW ver.	
Multifunctional Display: Navi-Sailor 4000 ECDIS or Multifunctional Display: Navi-Sailor 4100 ECDIS or AlphaBridge-T: AlphaChart-T	3.01.xxx * 3.01.xxx * 3.01.xxx * * Where xxx is 350 or higher	
Heading Control System (HCS)		
Description	Unit Type Designation	SW ver.
Raytheon NautoPilot 5400, consisting of:		
- Operator Unit Autopilot NP5000 AS	102-890 NG001 / NG002 Hardware Rev.: E00	E03.xx
- Autopilot Interface Unit	102-891 NG001 Hardware Rev.: E01	E01.xx
- Licence Key: NP 5400	-	-
or		
Sperry Navipilot 4000+ Track, consisting of:		
- Control and Display Unit	Type: 4960, Hardware Rev.: Cx	020800-0000-000 Rev.: x*
- Steering Control Unit	Type: 4961 Hardware Rev.: Ax	020801-0000-000 Rev.: x*
- Product Key: Navipilot 4000+ Track	Type: 4960-7100	-
		* Where x is L and onwards.
or		
Yokogawa PT900, consisting of:		
- Autopilot Control & Display Unit, including:	MPH490	-
- Adaptive controller	V8225AD	V8225HV Axx
- Control panel of adaptive	V8225AG	V8225HY Axx
- Annunciator unit	MPH690	V8225DY Axx
- System Selector	MPH790	-
- Mode Selector	MPH791	V8225EU Axx
- Main Control Unit, including	MPH291	
- Man. Terminal Board	-	V8225BX Axx
- CAN Adapter Board	-	V8225FD Axx
- NAV I/F Unit	MPT590	V8225FU Axx
or		
Navis NavAP, consisting of:		
- Control Panel	APH-5 or APH-7	06.02.xx.yy 06.02.xx.yy
- Control Unit	MCU, including Main MC	05.07.xx.yy
- Interface Box Type 2	IB-TCS-2	06.06.xx.yy

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(Optional)		
or		
Alphatron AlphaPilot MFM, consisting of:		
- Control Panel	AlphaPilot MFM GY or AlphaPilot MFM BK	10.00.xx.yy
- Control Unit	MCU or MCU-MS including Main MC Rudder MC Thruster MC	05.07.xx.yy 07.07.xx.yy 04.07.xx.yy
- AlphaPilot MFM Safety System (Optional)	APC3002 PCB	06.06.xx.yy

Note : See separate certificates for EDCDIS and Heading control Systems for more details.

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 NavAP or Alphatron AlphaPilot MFM and the required additional integration complies to the Track Control system for the DNV GL NAUT (AW) notation.

Tests carried out

- Performance testing, IEC 62065 (2014)
- Environmental testing, IEC 60945 (2002)
- Serial interface testing, IEC 61162-1 (2016)
- Performance testing, presentation, IEC 62288 (2014)
- DNV GL Rules Pt. 6, Ch. 6, Sec 3, 6.11 (using Navis NavAP or Alphatron AlphaPilot MFM)

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Type Examination documentation

DNV GL No	Doc Ref.	Rev.	Description
91	MEDB00003V1		Certificate: DNVGL, Alphapilot MFM
89	MEDB00003BU		Certificate: DNVGL, NautoPilot 5000 series
73	MEDB00001Z6	2	Certificate: DNVGL, NAVIPILOT 4000+
76	MEDB00001Z7	2	Certificate: DNVGL, NAVIPILOT 4000+ HSC
90	MEDB00003B5		Certificate: DNVGL, Navis AP3000-C/NavAP
65	MEDB00004F2		Certificate: DNVGL, Yokogawa PT900
7			Doc: Previously approved docs in cases 344.1-000763, 344.1-000932 and 262.1-003959
88		Dec. 2018	Manual: Multifunctional Display (v. 3.00.340) Installation Guide Part I
69		Oct. 2018	Manual: Multifunctional Display (v. 3.00.340) Installation Guide Part II
84		Oct. 2018	Manual: Multifunctional Display (v. 3.00.340). Additional Functions
68		Oct. 2018	Manual: Multifunctional Display (v. 3.00.340). Functional Description
72		Oct. 2018	Manual: Multifunctional Display (v. 3.01.350). Functional Description
86		Dec. 2018	Manual: Multifunctional Display (ver. 3.00.350) Installation Guide Part I
85		Dec. 2018	Manual: Multifunctional Display, Navi-Sailor 4000 ECDIS (ver. 3.01.350). Additional Functions
41		17.04.2103	Report: Track Control System 4000 (ver. 2.00.xxx) Test Report (with NP5400 and AP4000)
42		14.05.2013	Report: Track Control System 4000 (ver. 2.00.xxx) Test Report (with NP5400 and AP4000)
57		18.03.2016	Report: Track Control system 4000 (ver. 3.00.xxx) Test Report (with Raytheon NP5000, Sperry Navipilot 4000, Navis AP4000)
80		08.12.2016	Report: Track Control System 4000 (ver. 3.00.xxx) Test Report (with Sperry Navipilot 4000+)
58		18.03.2016	Report: Track Control System 4000 (ver. 3.00.xxx) Test report (with Yokogawa PT900)
81		02.11.2018	Report: Track Control system 4000 (ver. 3.01.xxx) Test Report (with Navis NavAP, AlphaPilot MFM)
83		Nov. 2018	Report: Track Control system 4000 (ver. 3.01.xxx) Test Report (with Sperry Navipilot 4000+)
82		02.11.2018	Report: Track Control system 4000 (ver. 3.01.xxx) Test Report (with Sperry Navipilot 4000, Raytheon NP5400, Navis AP4000, Yokogawa PT900)

Marking of product

The type designation and name and contact address of the manufacturer shall be affixed visibly, legibly and indelibly to the product. In addition the product shall be marked with serial number, safe distance to magnetic compass, power consumption and/or supply voltage.