

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

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 Electronic chart display and information system (ECDIS)

with type designation(s)
Navi-Sailor ECDIS

Issued to

Wärtsilä Voyage Limited
Dublin, Ireland

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

Regulation **(EU) 2020/1170**,
item No. MED/4.30. SOLAS 74 as amended, Regulations V/18, V/19, V27 & X/3, IMO Res. A.694(17), IMO Res. MSC.36(63), IMO Res. MSC.97(73), IMO Res. MSC.191(79), IMO Res. MSC.232(82), IMO Res. MSC.302(87), IMO MSC.1/Circ.1503 Rev.1

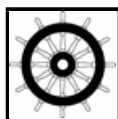
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2021-08-29**.

Issued at **Høvik** on **2020-09-28**

DNV GL local station:
Sweden CMC

Approval Engineer:
Roger Lauritsen



Notified Body
No.: **0575**

for **DNV GL AS**

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, and amended by Decision No 1/2019 dated February 22nd, 2019.

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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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



LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Job Id: **344.1-009325-1**
Certificate No: **MEDB00005C1**

Product description

The Navi-Sailor ECDIS comprises combinations of the following components:

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

Hardware modules and software versions are described in detail as hardware profile **HW1** in Wärsilä Voyage Hardware certificate. See Type examination documentation.

Operating system: Windows 10, Linux (Ubuntu 18.04)

Application/Limitation

- The ECDIS shall be supplied by an Uninterruptible Power Supply (UPS) in accordance with the Installation Guide.
- The ECDIS shall be installed & configured according to the Installation Guide.
- A dual installation of the designated ECDIS is found to comply with the SOLAS requirements for ECDIS with Back-up arrangements.

Tests carried out

- Performance testing, IEC 61174 (2015)
- Environmental testing, IEC 60945 (2002) incl. Corr.1 (2008)
- Serial interface testing, IEC 61162-1 (2016), IEC 61162-2 (1998)
- Ethernet interface testing, IEC 61162-450 (2011) + A1 (2016)
- Performance testing, presentation, IEC 62288 (2014)
- Bridge Alert Management. IEC 62923-1 (2018), IEC 62923-2 (2018)

Note:

- Interconnection with VDR is tested in accordance with IEC61996-1(2013) annex E-G and Ethernet interconnection IEC 61162-450 (2011)
- Target tracking is tested in accordance with IEC 62388 (2013) ch. 11.3

Type Examination documentation

DNV GL No	Doc. Ref.	Rev.	Description
3	TAA00002KA		Certificate: Platform certificate Wärtilä Voyage ECDIS version 5.01.xxxx.yy
1		v.5.01	Manual: Navi-Sailor ECDIS (v. 5.01) User Manual
5			Manual: Navi-Sailor ECDIS (v. 5.01). Installation Guide
4			Report: Navi-Sailor ECDIS test report (ver 5.01)

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.