

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)
TECDIS TCS

Issued to

Telko AS
TJØME, Norway

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)

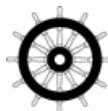
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2021-02-11**.

Issued at **Høvik** on **2016-02-12**

DNV GL local station:
Sandefjord

Approval Engineer:
Frederik Tore Elter



Notified Body
No.: **0575**

for **DNV GL AS**

Vidar Dolonen
Head of Notified Body

Product description

TECDIS TCS track control system consists of:

- Telko TECDIS, ECDIS
- Raytheon Anschütz NP5500, heading control system

TECDIS TCS is consisting of the following components:

ECDIS : TECDIS components	model	comment
Computer	Ref. ECDIS certificate	Several component configurations are available
Monitor	Ref. ECDIS certificate	
Keyboard	Ref. ECDIS certificate	
Trackball	Ref. ECDIS certificate	
Serial interface unit	Ref. ECDIS certificate	
Software Version	4.7.2.xx	

and

HCS : NP5500 components	model	comment
Operator unit NP5000 AS	102-890 NG001	
Autopilot interface	102-891 NG001	
Software Version	102-890 P00 Ex.x 102-890 P01 Ex.x	
Rudder position fallback unit	AP safety system -SASS	

For latest revision, see <http://exchange.dnv.com/tari>

Application/Limitation

- The TECDIS TCS complies with the requirements for IEC Category C Track Control
- The equipment identified in the product description shall hold valid type approval certificates.
- The TECDIS TCS shall be interconnected to a BNWAS alarm transfer system via serial line(NMEA).
- The TECDIS TCS shall be installed and tested onboard according to Installation and Service manuals referred to in the Appendix.

Type Examination documentation

DNV GL No.	Doc. Ref.	Rev.	Description
1	09 Feb.2007	05	Conformance test of ECDIS and TCS
12	11 May 2005	02	TECDIS conformance test report
87	TTD01_01_13_NP5500		EC type approval Nautopilot NP5500
87	28.01.2013	1.0	EC type approval –Autopilot NP5500 with heading, course & track control
87	WN 221-2-051		NP5000 Serial interface
88	28 th october 2013	02	Conformance test of TECDIS TCS (Anschutz NP5500)
93	Syberg	4	SASS – Operator and Installation manual
	MED-B-8975		DNV type examination -TECDIS
96	SW 4.7.x.x		TECDIS Installation Manual edition 2.8
97	4002.DOC010302		NautPilot 5000 Series – Service Manual
98	4002.DOC010102		NautPilot 5000 Series – Operator Manual
101	STO/21.01.2013		Test report NP5500 according IEC62065(2002)
101	STO/25.01.13		Stichprobentest NP5500 ver. E99.78
102	22 Jan.2013		HW test report NP5500 – performance tests

Job Id: **344.1-000651-9**
Certificate No: **MEDB00000JW**

DNV GL No.	Doc. Ref.	Rev.	Description
102	8th January 2015		2nd Conformance test of TECDIS TCS (Anschutz NP5500)
103	12th January 2015		Alert handling and comm. between TECDIS and NP5500
104	WN221-2-051(E)		NP5000 Serial Interface
110	12 158 - 10 HH		Certificate: MED-B Heading Control System (HCS)
112			Report: Conformance test of TECDIS with IEC62288 2 nd edition.

Tests carried out

- Performance testing, IEC 62065 (2014)
- Performance testing, presentation, IEC 62288 (2014)
- Environmental testing, IEC 60945 (2002)
- Serial interface testing, IEC 61162-1 (2010)

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.

Mark of Conformity

The manufacturer is allowed to affix the Mark of Conformity according to Article 11 in the Council Directive 96/98/EC on Marine Equipment and shall issue a Declaration of Conformity, only when the module D or E or F of Annex B in the same directive is fully complied with.

Module D: The quality system for production and testing shall be approved by the Notified Body.

Module E: The quality system for inspection and testing shall be approved by the Notified Body.

Module F: Compliance of the products to type as described in this EC Type-Examination Certificate must be verified by the Notified Body who also shall issue a Certificate of Conformity.

USCG Approval for TCS

An 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.