EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB000033N
Revision No:
1

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED). This Certificate is issued by DNV SE based on the notification of the Federal Maritime and Hydrographic Agency of Germany.

This is to certify:

That the MF/HF radio capable of transmitting and receiving DSC, NBDP and radiotelephony

with type designation(s)
NHR-1500

Issued to
New Sunrise Co.,Ltd.
Suzhou City, Jiangsu, China

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2022/1157,**
item No. MED/5.14. SOLAS 74 as amended Reg.IV/10,14 & X/3,IMO Res.A.694(17),806(19),IMO Res.MSC.36(63),97(73),302(87),MSC/Circ.862,1460,IMO COMSAR Circ.32,ITU-R M.476-5(10/95),492-6(10/95),493-15(01/19), 541-10(10/15),625-4(03/12),1173-1(03/12)

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

This Certificate is valid until **2027-10-20**.

Issued at **Hamburg** on **2022-10-21**

DNV local station:
Shanghai

Approval Engineer:
Steinar Kristensen

Notified Body
No.: **0098**

for **DNV SE**

Digitally signed by
Dudszus, Sven
Location: Hamburg
Reason: on behalf of

Christine Mydlak-Roeder
Head of Notified Body

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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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

Product description

NHR-1500 is a MF/HF Radio (GMDSS) with integrated Class A DSC controller and watch-keeping receiver, Narrow Band Direct Printing (NBDP), consisting of the of the following components:

Component	Description	Model name	SW Ver.	Location	Comments
Transceiver unit	Transceiver Unit for transmitting and receiving radio signal, 150W	NHR-1500T	1.xx	Protected	1x 24VDC/16A input power 2xRS422 input/output
Control unit	Control Unit including display with user interface	NHR-1000C	1.xx	Protected	1 x LAN 1 x RS232 for printer
Antenna coupler	Tuner for antenna to transmitter	NHR-1000A	1.xx	Exposed	
Handset	Push-To-Talk (PTT) handset for voice communication	NHS-200		Protected	
NBDP Terminal	Terminal unit for NBDP	NBD-100	1.xx	Protected	1xLAN 1xRS232 for printer
Accessories					
Power Supply Unit	AC/DC Power Supply Unit	NPS-300		Protected	Input: 110V or 220VAC/ 24VDC Output: 24VDC, 30A
Tx/Rx Antenna	Whip antenna, 8m including mounting kit	NHA100		Exposed	
DSC Watch Rx Antenna	Whip antenna with pre-amplifier	NXA100 and NXA100A		Exposed	
Printer	Printer	NPT-100		Protected	
Keyboard	Keyboard for NBDP	NKB-100		Protected	
Speaker	External speaker	NSK-100		Protected	
Alarm Unit	External button for Distress	NAU-100		Protected	

Location specifies the location for the units according to IEC 60945 (2002).

Application/Limitation

- The NHR-1500 shall be installed according to manufacturer's User & Installation Manual.

Type Examination documentation

DNV No	Drawing No	Rev.	Title
22	NSR-NHR1500A-TEST20221012	2022-10-12	Report: NSR, Excessive conditions test report for NPS-300 power supply
21	NSR-NHR1500A-TEST20221006	2022-10-06	Report: NSC, Excessive conditions test report for NHR-1500A 20221006
20	NSR-NHR1500A-TEST20220928	2022-09-28	Report: NSR, Extreme power supply test report for NHR-1500A
17	NSR-NHR1500A-TEST20220901	2022-09-01	Report: NSR, Acoustic noise and signals test report for NHR-1500A
15	A22-006-WT	2022-09-02	Report: SiTiiAs, EMC and environmental test report for MF/HF Radio Equipment Accessories
14	NSR-NHR1500-TEST220708	2022-07-07	Report: NSR, NHR-1500 ETSI EN 301 843-5 Test Report
11	NSR-NHR1500-TEST220425P	2022-05-23	Report: NSR, NHR-1500 MF/HF Radio BAM and IEC 61162-450 performance test report
10	NSR-NHR1500-TEST170701P	2017-07-13	Report: NSR, Performance test report for NHR-1500 MF/HF Marine Radio Equipment
9	9065 17 18690_61162	2017-07-11	Report: DNV, IEC 61162-1 and -2 test report for NHR-1500 MF/HF Radio Equipment
8	A17-011-ZC	2017-08-16	Report: SiTiiAs, EMC and environmental test report for NHR-1500 MF/HF Radio Equipment

6	NHR-1500 OM.E 20220919-17	17	Manual: NSR, User Manual, MF/HF Radio (GMDSS) NHR-1500
5	9065 17 18690_62288	2017-07-05	Report: DNVGL, IEC 62888 test report for NHR-1500 MF/HF Radio

Tests carried out

- Radio tests: ETSI ETS 300 067 (1990-11) incl. A1 (1993-10)
- DSC tests: ETSI EN 300 338-1 v1.6.1 (2021-05)
  ETSI EN 300 338-2 v1.5.1 (2020-06)
- EMC and radio tests: ETSI EN 300 373-1 V1.4.1 (2013-09)
  ETSI EN 301 843-5 v2.2.1 (2017-11)
- Environmental tests: IEC 60945 (2002) incl. IEC 60945 Corr. 1 (2008)
- Interface tests: IEC 61162-1 (2016), IEC 61162-2 (1998) and IEC 61162-450 (2018)
- Bridge Alert Mangement: IEC 62923-1 (2018) and IEC 62923-2 (2018)

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.
According to Article 10 of the Council Directive (MED):

- The wheel mark shall be affixed visibly, legibly and indelibly to the product or to its data plate and, where relevant, embedded in its software. Where that is not possible or not warranted on account of the nature of the product, it shall be affixed to the packaging and to the accompanying documents.
- The wheel mark shall be affixed at the end of the production phase.
- The wheel mark shall be followed by the identification number of the notified body, where that body is involved in the production control phase, and by the year in which the mark is affixed.
- The identification number of the notified body shall be affixed by the body itself or, under its instructions, by the manufacturer or the manufacturer's authorised representative.

For specific products, manufacturers may use an appropriate and reliable form of electronic tag instead of, or in addition to, the wheel mark.