



DET NORSKE VERITAS

TYPE EXAMINATION CERTIFICATE

CERTIFICATE NO. A-12230
This Certificate consists of 3 pages

This is to certify that the
Bridge Navigational Watch Alarm System (BNWAS)
with type designation(s)
BR-500

Manufactured by
Furuno Electric Co., Ltd.
Nishinomiya Hyogo Pref, Japan

is found to comply with
IMO Res. A.694(17) General requirements for shipborne radio equipment forming part of the global maritime distress and safety system (GMDSS) and for electronic navigational aids
IMO Res. MSC.128(75) Performance Standards for a Bridge Navigational Watch Alarm System (BNWAS)
MSC.191(79) Performance standards for presentation of navigation-related information on shipborne navigational displays

Application
Location

Place and date
Pusan, 2011-02-24
for DET NORSKE VERITAS AS

Svein Helge Juell
Head of Section



Local Office
Kobe

This Certificate is valid until
2015-06-30

Kwang Whan Cho
Surveyor

Notice: This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Examination Certificate and not to the approval of equipment/systems installed.

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.



Cert. No.: A-12230
File No.: 847.70
Job Id.: 262.1-010557-1

Product description

BR-500 is consisting of following components:

Model	Product Description	Location	Software Version
BR-510	Main Alarm Panel	Protected	Boot:240054-01.xx Application:2450056-01.xx
BR-520	Processor Unit	Protected	Boot:240058-01.xx Application:2450060-01.xx
BR-530	Time Reset Panel	Protected	-
BR-540	Cabin Panel	Protected	-
BR-550	Cabin Panel	Exposed	-
BR-560	Motion Detector	Protected	-
BR-570	Flash Beacon	Protected	-

Application/Limitation

- BR-500 shall be powered from a battery maintained supply, such as ship's battery pack, which has capacity to maintain operation of BR500 for a period of 6 hour at least.
- Main alarm panel (BR-510) shall be positioned on bridge where providing proper lookout
- BR-500 does not comply with DNV Rule Pt.6 Ch.8- Nautical Safety (July 2010).

Type Approval documentation

- Test Report (IEC61162), Doc. No. :K24-17-293
- Test Report (IEC60945), Doc. No.: FLI-12-10-042, Furuno Labotec International Inc.
- DNV Type approval testing report, Doc. No: K24-17-290-3
- Operator's Manual, Doc No. OME-44610-A3

Tests carried out

- IEC60945(2002)
- IEC61162-1 (2007)
- IEC62616 (2010)
- IEC62288(2008)



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Marking of product

The Manufacture 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.

Certificate retention survey

The scope of the retention/renewal survey is to verify that conditions stipulated for the type are complied with, and that no alternations are made to the product design or choice of system component and/or materials.

The main elements of the survey are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where applicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensure that system, software version, components and/or materials used comply with type approved documents
- Review of possible change in design of system, software version, components, materials and/or performance, and make sure that such changes do not affect the type approval given.
- Ensure traceability between manufacturer's product type marking and type approval certificate

Retention survey is to be performed at least every second year.

END OF CERTIFICATE