

MARINE DIVISION

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Certificate number: 07494/C0 BV

File number : LSA 6337/02

Product code : 6032H

This certificate is not valid when presented without the full attached schedule composed of 7 sections

TYPE APPROVAL CERTIFICATE

as per Bureau Veritas Classification Rules

This certificate is issued to

C M HAMMAR AB

V:a Frölunda - SWEDEN

for the type of product

HYDROSTATIC RELEASE UNIT

Hydrostatic Release Unit , Type HAMMAR H20 & Hydrostatic/Electric Remote Release Unit, Type H20 ERU, for float-free arrangement of EPIRB's

Regulations and standards :

SOLAS 74 Convention, as amended
Regulation III/4, Regulation X/3 Regulation III/13.4.2, III/26.2.2 and III/34
IMO Resolution MSC.48 (66)
IMO MSC/Circ. 811
IMO Resolution MSC.97 (73) 8.1 and 8.6 (2000 HSC Code)
IMO Resolution MSC.81(70)

This certificate is issued to attest that BUREAU VERITAS did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements of the Regulations and standards mentioned above.

This certificate is valid until : 24 Jan 2013

At Paris la Défense, on : 24 Jan 2008

For BUREAU VERITAS,
By order of the Secretary

Approval office

Local office : BV GOTHENBURG
Surveyor : M. Moller

L. COURREGELONGUE



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with BUREAU VERITAS. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of BUREAU VERITAS Marine Division. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against BUREAU VERITAS for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

- The **HAMMAR H20** Hydrostatic Release Unit is intended for fitting Float-free arrangements of EPIRB's. It is not fitted with a manual operation device. It does not need to be periodically serviced (It is of "disposable type"). Set for release at a depth not less than 1.5 metres and not greater than 4 metres.

-The version **HAMMAR H20-ERU** (Hydrostatic /Electric Release Unit) is intended for use together with an Electronic Remote Release system, designated under trade name "*Hammar ERRS*", i.e. EPIRB's can be released from one or more remote positions. The ERRS system is powered by the ship's Emergency Power Supply and by a back-up battery at every Control Panel. The ERRS system may be activated from one or several remote release positions. The ERRS system does not affect the hydrostatic function of the HAMMAR H20.

2. DOCUMENTS AND DRAWINGS:

Drawings:

- A000164 Rev.1: Hydrostatic Release Unit Hammar H20 for EPIRB's
- A000166 Rev.1: Hydrostatic/Electric Release Unit Hammar H20 ERU for EPIRB's

No departure from these drawings is permitted without the prior consent of the society.

3. TEST REPORTS:

- Type tested in accordance with IMO Resolution A521 (13) under supervision of the Swedish Maritime Safety Inspectorate, as per test report nr 31.309.78.212 dated 01/10/1985. The tests were carried out by SP. Statens Provningsanstalt National Testing Institute - Department of Materials Testing and Mechanics, PO Box 857, S-501 15 BORAS, Sweden as per test report N° 85M51019 dated 28/08/1985, test report N° 85M51019 dated 29/08/1985 (Test on membranes)

- Further, type tested after modification of the knife under supervision of the Swedish Administration of Shipping - Sjöfartsverket, as per test report ref. 21.99-90 34084 dated 24/01/1990. The tests were carried out by SP Swedish National Testing and research Institute, Boras, Sweden in accordance with paras 5.16.2.1 & 2.2 of Part 1 of IMO Res. A521 (13), as per test report n° M51400 dated 04/09/1990.

- Further, reassessed by the Swedish National Maritime Administration - Maritime Safety Inspectorate as per letter dated 10/12/1993 for checking of compliance with IMO Res. A689 (17).

- Further, reassessed by Bureau Veritas for checking compliance with IMO Resolution MSC. 81(70), Part1, section 11.

- The ERRS system was type tested in accordance with EN 60945 : 1997 by SP Laboratory (Swedish National Testing and Research Institute), as per test reports N° P206128 rev.1 dated 2003-02-24 & N° P206128-1 dated 2003-02-27 (corrosion test), and, for EMC tests, by EMC VÄST AB, Sweden, as per test report N° 02090P , dated 2002-11-08.

4. APPLICATION / LIMITATION:

- Plastic bolt : Tensile strength of the plastic bolt was tested by SP Swedish National Testing and research Institute, Boras, Sweden as per test report N° 90M10348 dated 20/03/1991.

Other materials and/or components:

As per drawings N° A000164 & A000166, as relevant:

- Material for Knife - part N° 11: chromium steel "SF100".
- Membrane - part N° 9: silicone rubber.
- Knife-spring stopper - part N° 3: Nylon 6 with 30% glass fiber reinforcement block.
- Knife-spring - part N° 7: stainless steel SS2343.
- Stud (spring-tensioned grip) - part N° 5: stainless steel SS2343.

Application / Limitation:

- It needs no annual service, maintenance or spare parts, but must be replaced after two years.

On board installation / Maintenance requirements:

- To be installed on board in accordance with requirements of SOLAS 74 Convention, as amended, and Manufacturer's instructions.
- It shall be provided with a simple system of recording the expiry date (month/year) at which the unit must be replaced.
- If marked with more than a single expiry date (month/year), the unit will be invalid and must be replaced.
- To be supplied with installation instructions written in English language.

5. PRODUCTION SURVEY REQUIREMENTS:

To be manufactured, checked for quality and tested in accordance with the protocol approved by Bureau Veritas on the basis of IMO Resolution MSC. 81(70), Part 2 and section 2, para. 2.2 of chapter 4, Part IV of Survey of LSA - Volume 2 Instructions for the guidance of Surveyors.

6. MARKING OF PRODUCT:

To be permanently marked on the unit or identification plate securely attached to the unit, as follows:

- HAMMAR H20-EPIRB or HAMMAR H20 ERU-EPIRB
- Serial number.
- Expiry date.
- BV (SOLAS) approved.
- For EPIRB use only.
- The notation: "DO NOT PAINT".

7. OTHERS:

-This approval is given on the understanding that the Society reserves the right to require check tests to be carried out on the HRU's at any time and that CM HAMMAR AB, Sweden will accept the responsibility for informing shipbuilders or their subcontractors of the proper methods of use and general maintenance of the equipment and the conditions of this approval.

-This certificate supersedes the certificate of Type Approval N° 07494/B1 BV, issued on 26/03/2003 by the Society.

End of document.

*** END OF CERTIFICATE ***