

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB0000845

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 AS under the authority of the Government of Norway.

This is to certify:

That the **A & B Class divisions fire integrity: B class divisions.**

with type designation(s)
B-15 Bulkhead Extension

Issued to

Nordic Shipbuilding Materials NSM Oy
Naantali, Finland

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

Regulation (EU) 2022/1157,
item No. MED/3.11b. SOLAS 74 as amended, Regulation II-2/3.4 & II-2/9, IMO 2010 FTP Code, IMO
MSC/Circ.1120 and IMO MSC.1/Circ.1581

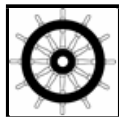
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2028-05-16**.

Issued at **Høvik** on **2023-05-17**

DNV local unit:
Finland NB

Approval Engineer:
Marcin Tobiasz



Notified Body
No.: **0575**

for **DNV AS**

Sverre Olav Bergli
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 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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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 AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") 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.



Product description

"B-15 Bulkhead Extension", composed of 50 mm mineral wool slabs ISOVER ULTIMATE U SeaProtect Slab 66 Alu 1 (density 66 kg/m³, manufactured by Saint-Gobain Isover G+H AG), mounted to 1 mm thick steel profiles (width of 75 mm) on exposed side by adhesive Kiilto Keernaliima with 4.2 mm self-tapping screws and Ø 40 mm washers. The steel profiles are to be fixed to deck above, side walls and top of B-15 divisions by 4.2 mm self-tapping screws and Ø 40 mm washers with spacing approx. 150 mm.

All penetrations for steel air ducts, cables, steel cable trays, thermoplastic pipes (max size Ø25 mm), FRP pipes (max size Ø50 mm) and steel pipes (max size Ø60 mm) are insulated with 50 mm thick slab (from 300x300 mm to 600x500 mm) ISOVER ULTIMATE U SeaProtect Slab 66 Alu 1 placed as an additional insulation layer to the bulkhead extension fixed with 4-6 pcs of steel pins and locking washers. In addition, air ducts, steel pipes and cable ladder are insulated on unexposed side up to 450 mm length with one layer of 50 mm mineral wool ISOVER ULTIMATE U SeaProtect Roll 24 Alu 1 (density of 24 kg/m³, manufactured by Saint-Gobain Isover G+H AG) and faced with aluminium tape around the insulation. In addition, intumescent material was used around the thermoplastic and FRP pipes.

All penetrations for air ducts, cables, plastic and steel pipes shall be sealed on the unexposed side with sealing compound A-60 PENESEAL PS-100A (only mix of PS-A and PS-B) manufactured by PnC Tech Busan Co. Ltd and on the exposed side with Keernaliima glue. Penetrations for cable duct shall be sealed with A-60 PENESEAL PS-100A Sealer (PS-S) on both sides.

Maximum height of the Wall Extension: 1200 mm

Application/Limitation

Bulkhead extension approved for use as of class B-15 fire retarding division.

The bulkhead extension may only be installed in concealed and inaccessible spaces.

The insulation materials and adhesives used have to be approved according to the Marine Equipment Directive and bear the Mark of Conformity. This requirement may also be applicable for surface materials used, if required by relevant rules and regulations.

Each product is to be supplied with its manual for installation, use and maintenance.

Type Examination documentation

Test Report No. EUFI29-22000499-T1 dated 30 May 2022 from Eurofins, Espoo, Finland.

Drawing No. NSM-2200012-01 dated 9 August 2022 from maker.

Drawing No. NSM-2200012-03 dated 9 August 2022 from maker.

Manual for installation No. NSM-2200010 from maker dated 19 April 2022

Tests carried out

Tested according to IMO 2010 FTP Code Part 3.

Marking of product

The product or packing is to be marked with name and address of manufacturer, type designation, fire-technical rating, the MED Mark of Conformity and USCG approval number if applicable (see first page).