

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB00007HB

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: A class divisions.**

with type designation(s)

Class A-15 Bulkhead - LYKR-15-BHD (Biowool Marine Blanket wrapped)

Issued to

Luyang Energy-saving Materials Co., Ltd.
Zibo, Shandong, China

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

Regulation (EU) 2021/1158,

item No. MED/3.11a. SOLAS 74 as amended, Regulation II-2/3.2 & II-2/9, IMO 2010 FTP Code, IMO MSC/Circ.1120 and IMO MSC.1/Circ.1434, IMO MSC.1/Circ.1435.

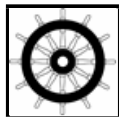
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2026-10-10**.

Issued at **Høvik** on **2021-10-11**

DNV local station:
Qingdao NB & CMC

Approval Engineer:
Tessa Biever



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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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

'Class A-15 Bulkhead - LYKR-15-BHD (Biowool Marine Blanket wrapped)'

Composed of a structural steel bulkhead insulated with one layer of 20 mm thick 'LYKR-900T' (Biowool Marine Blanket wrapped manufactured by Luyang Energy-saving Materials Co. Ltd. with density of 64 kg/m³) applied on the steel structural core as well as on the stiffeners following their contours.

The blanket width is compressed from 610 mm to 600 mm and to be installed in 600 mm widths to form slight compressed butted joints.

The blankets are held in place using steel copper coated pins (Ø3 mm) welded to the bulkhead with Ø30 mm washers. The pins are to be installed with a nominal spacing of 300 mm across the blanket and on average 300 mm (max. 350 mm) along the blanket, whereas the pins at the joints between the blankets shall have a nominal spacing of 160 mm from the blanket edge.

Fur further details see documentation listed under Type Examination documentation.

Application/Limitation

Approved for use as a vertical fire retarding division of Class A-15.

The insulation materials and adhesives used have to be approved according to the Marine Equipment Directive and bear the MED 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 and maintenance.

Type Examination documentation

Test report No. FT21207 dated 2021-07-08 from FEFTC, Shanghai, China.

Drawing No.BHD-LYFP-15 from manufacturer

Tests carried out

Tested according to IMO 2010 FTP Code part 3.

Marking of product

The product 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).