

# EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:  
**MEDB00008E6**

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 Fire resisting divisions for high speed craft**

with type designation(s)

**60 minute HSC Aluminum Bulkhead 2 mm - Biowool Marine Blanket**

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) 2022/1157**,

**item No. MED/3.34. SOLAS 74, Regulation X/3, 2000 HSC Code 7, IMO MSC.1/Circ.1457 and IMO 2010 FTP Code**

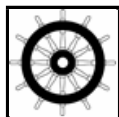
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2028-06-14**.

Issued at **Høvik** on **2023-06-15**

DNV local unit:  
**Qingdao NB & CMC**

Approval Engineer:  
**Timo Linn**



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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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

"60 minute HSC Aluminum Bulkhead 2 mm - Biowool Marine Blanket", composed of a 2 mm thick aluminum bulkhead horizontally stiffened on the exposed side by 25 mm wide x 35 mm high x 3 mm thick T-shape stiffeners, spaced at 137 mm. The bulkhead is additionally reinforced by vertical aluminum T-shaped beams (3 x 85 / 6 x 60), located (welded) across to the stiffeners and spaced at 1370 mm.

The bulkhead is insulated on the exposed side with two layers of 25 mm thick density 70 kg/m<sup>2</sup> Biowool marine blanket (Type: LYKR-900T) applied across the stiffeners. The T-shapes beams are insulated around with two layer of 25 mm thick density 70 kg/m<sup>2</sup> Biowool marine blanket of the same type.

The width of blanket is 610 mm and is to be compressed to a width of 600 mm to ensure compression at joints.

The bulkhead insulation is held in place using Ø3 mm aluminum head steel pins and 30 mm steel clips with spacing as specified in the drawing LYBW-60-ALBULKHEAD. The pins are to be installed with a maximal spacing of 250 mm. Pins at the joints between blankets shall have a nominal spacing of 100 mm from the blanket edge.

For further details see test reports listed under Type Examination documentation.

## Application/Limitation

Approved as a non-loadbearing fire-resisting bulkhead 60.

Restricted application: Fire against insulated side.

Only the combined product is approved as a fire resisting division. Maker is to ensure that the product is manufactured and installed as tested (see Type Examination documentation).

The insulation material LYKR-900T type Biowool marine soluble fire blanket produced by the client, any other used insulation material, any surface materials and adhesive used must be approved according to the Marine Equipment Directive and bear the MED Mark of Conformity.

Any surface materials used must be approved for smoke and toxicity and low flame spread characteristics (IMO 2010 FTP Code Annex 1 parts 2 and 5) when required according to relevant rules.

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

## Type Approval documentation

Test report No. FT22142 dated 16<sup>th</sup> of September 2022 from FAR EAST FIRE TESTING CENTRE, Shanghai, China.

## Tests carried out

Tested according to IMO FTP Code Part 11

## Marking of product

The product is to be marked with name and address of manufacturer, type designation, fire technical rating, MED Mark of Conformity and USCG approval number if applicable (see page 1).