DNV·GL

Certificate No:
MEDB00004GS

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

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 GL AS under the authority of the Government of Norway.

This is to certify:

That the "A" Class divisions, fire integrity

with type designation(s)
Class A60 Bulkhead - LYBST - Basalt Rock Wool Board

Issued to
Luyang Energy-saving Materials Co., Ltd.
Zibo, SD, China

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2018/773,**
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

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

This Certificate is valid until **2023-11-04**.

Issued at **Høvik** on **2018-11-05**

DNV GL local station:
Qingdao

Approval Engineer:
Helge Bjørnarå

Notified Body
No.: **0575**

for **DNV GL AS**

Roald Vårheim
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.

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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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

NORWEGIAN ACCREDITATION PROD 019

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Product description

Class A60 Bulkhead - LYBST - Basalt Rock Wool Board,
composed of a structural steel bulkhead insulated with two layers of 30 mm thick (total thickness 60 mm) LYBST type Basalt rock wool board (density 45 kg/m^3) between stiffeners and one layer of 280 mm wide and 30 mm thick LYBST type Basalt rock wool board (density 45 kg/m^3) on the stiffeners. The inside of the stiffeners are also to be insulated with the same boards. These boards are manufactured by Luyang Energy-saving Materials Co., Ltd.

The boards are held in place using steel pins (Ø3 mm with Ø30 mm washers/clamp rings) welded to the bulkhead. The pins are to be installed with a maximum spacing of 325 mm. Maximum pin distance to joints is 115 mm.

For further details see drawing under "Type Examination documentation" below.

Application/Limitation

Approved for use as a fire retarding bulkhead of class A-60.

General application: Fire hazard from either side

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 and maintenance.

Type Examination documentation

Test report No. FT17320 dated 22 May 2018 from Far East Fire Testing Centre, Shanghai, China.

Drawing No. BULKHEAD-BSTBW-45 from maker.

Tests carried out

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 front page).