

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Equivalent Class A Divisions**

with type designation(s)
HB Soluble wool BKH-60 Type Class A-60 Bulkhead

Issued to

Shandong Minye Refractory Fibre Co., Ltd.
Zibo, China

is found to comply with
DNV GL rules for classification – Ships
DNV GL offshore standards
DNV GL statutory interpretations DNVGL-SI-0364 – SOLAS interpretations

Application :

Approved for use as non-load bearing fire retarding bulkhead of class A-60.

This certificate is recognized by Transport Canada.

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Issued at **Høvik** on **2019-04-19**

This Certificate is valid until **2024-04-18**.

for **DNV GL**

DNV GL local station: **Qingdao**

Approval Engineer: **Krzysztof Kolakowski**

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Mårten Schei-Nilsson
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.



Product description

"HB Soluble wool BKH-60 Type Class A-60 Bulkhead"

is composed of two layers of 40 mm thick type "THG-60 HB Soluble Wool" ceramic wool from the manufacturer with nominal density of 60 kg/m³ and 4.5 mm thick corrugated steel sheet from exposed side. Joints of the second layer of insulation overlap joints of the first layer by minimum 20 mm. Corrugations of steel sheet have dimensions of 600 x 50 mm (pitch x depth) and are filled with 50 mm thick type "THG-60 HB Soluble Wool" ceramic wool from the manufacturer with nominal density of 60 kg/m³.

Anchoring of insulation to bulkhead is done with Ø3 mm welded steel pins with Ø30 steel washers positioned in square pattern with 300 mm maximum distance between adjacent pins. Maximum distance between insulation panels joint and pins is 250 mm.

Total thickness: 134.5 mm

For further details see drawing listed under Type Approval documentation below.

Application/Limitation

Approved for use as non-load bearing fire retarding bulkhead of class A-60.

General application: fire from either side.

The use of this product shall be limited to applications specifically approved by the Administration in question, see IMO 2010 FTP Code part 3, Appendix 1, items 1.12 and 1.13. The construction shall in any case not be used as part of main fire zone bulkheads and stairways enclosures on passenger ships (see also IMO MSC/Circ.1005).

Any surface materials used have to 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, use and maintenance.

Type Approval documentation

Certification in accordance with Class Programme DNVGL-CP-0338, September 2018.

Test report no. FT18268 dated 11 December 2018 from Far East Fire Testing Centre (FEFTC), Shanghai, China.

Drawings no.HLBA60(BKH-60)-00, HLBA60(BKH-60)-01, HLBA60(BKH-60)-00SY and HLBA60(BKH-60)-01SY all dated 8 October 2018 from the manufacturer.

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 of manufacturer, type designation and fire-technical rating.

Transport Canada Approval

Based on the procedures laid down in the Transport Canada Publication entitled "Approval Procedures for, Life Saving Equipment and Structural Fire Protection Products (TP 14612)", DNV GL confirms that the product/s listed in this certificate is/are in accordance with Transport Canada's requirements.

Periodical assessment



Job Id: **262.1-029507-1**
Certificate No: **TAF0000151**

DNV GL's surveyor is to be given permission to perform Periodical Assessments at any time during the validity of this certificate and at least every second year. The arrangement is to be in accordance with procedure described in Class Programme DNVGL-CP-0338, Section 4.