DNV·GL

Certificate No:
MEDB000069K

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 Fire Doors

with type designation(s)
Class A60 double leaf sliding door - Type HB-SD

Issued to
Baggerød AS
HORTEN, Norway

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2019/1397,**
item No. MED/3.16. SOLAS 74 as amended, Regulation II-2/9, IMO 2010 FTP Code and IMO MSC.1/Circ.1511, IMO MSC.1/Circ.1319

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

This Certificate is valid until **2025-03-12**.
Issued at **Høvik** on **2020-03-13**

DNV GL local station:
Norway Fleet in Service, East-South

Approval Engineer:
Marcin Tobiasz

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, 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 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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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 A-60 double leaf sliding door - Type HB-SD",
is an insulated double leaf sliding door with rollers on the top (suspended) and guided at the bottom by an inverted U-profile fixed to the frame.

Both the door leaves consist of an insulation core with 2.0 mm thick steel sheets on each side. The steel sheets are reinforced inside along the vertical edges as well as along the bottom edge with 3.0 mm thick U-profile spot welded to the steel sheets at c/c 300 mm. The U-profile along the bottom edge was turned up-side down and the two lower edges were additionally tack welded to the stainless-steel sheets at c/c 300 mm. The reinforcement along the top edge of the door leaves consist of 3 mm thick steel U-profile with the vertical 95 mm flange towards the front side of the door leaves. The steel profile is spot welded to the stainless-steel sheets at 200 mm c/c.

The insulation cores of the door leaves consist of three layers (38+38+25 mm thick "FireMaster Marine Plus" of nominal density 96 kg/m^3 (manufactured by Morgan Advanced Materials)) and is mounted in full length from top to bottom with staggered vertical joints. The insulation is kept in place by means of one row of ø3 x 16 mm steel pins welded to the steel sheet towards the back side of the door leaves.

Two 2 mm thick steel reinforcement L-profiles are sport welded vertically to the stainless-steel sheet inside along the back side of the door leaves. They were spot welded to the stainless-steel sheet along both sides of the 25 mm wide flange at c/c 400 mm staggered with 200 mm.

Along the top and the vertical edges, the steel sheets of the door leaves are folded together forming an overlap of 20mm toward the front side of the door leaves.

The 3mm thick labyrinth profile is tack welded along the top and the trailing edge and spot welded at c/c 300mm along the back side of the door leaves.

All the edge profiles and the labyrinth profiles on the door leaves are fully welded along the ends.

The door frame (stationary labyrinth) along the top and the vertical edges consist of 3 mm thick stainless-steel profiles. The bottom part of the frame is formed as a S-profile and inside this profile a 3 mm thick U-profile is tack welded upside down at c/c 200mm along both sides of the profile.

The door frame (labyrinth profiles) are fixed to the steel bulkhead along all four sides with M8 x 25 mm bolts at c/c 300 mm.

The door frame may be either bolted (as described above) or welded to the steel bulkhead.

Along the top, both the door leaves are mounted with two roller devices fitting into the rail track mounted to the steel bulkhead along the top of the sliding door. The two door leaves are closing against each other in a 60 mm deep, interconnecting overlap.

Total door thickness is 104 mm, and 125 mm including door leaf outside back profile.

For further details see drawings listed under Type Examination documentation below.

Application/Limitation

The door is approved for installation in steel bulkheads of class A-60. Installation of the door in bulkheads made of other materials (aluminium, FRP, etc.) are subject to case-by-case approval.

Max. size of door leaf A:	1505 x 2907 mm (W x H)
Max. size of door leaf B:	1465 x 2907 mm (W x H)
Max. clear opening of door:	2590 x 2720 mm (W x H)

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.

The door has only been successfully tested (60 mm overlap between the two door leaves) with extended test period in compliance with IMO MSC.1/Circ.1319 for the door leaves mounted away from the furnace.

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

Type Examination documentation

Test report No. PGA10585 dated 24 March 2015 from DBI, Hvidovre, Denmark.
Test report No. PGA10617 dated 16 March 2015 from DBI, Hvidovre, Denmark.

Assessment/confirmation dated 3 June 2019 from Morgan Advanced Materials.

Drawing No. 19331-002, Rev. 0 dated 17 November 2014 from the 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).