

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Class A Door**with type designation(s)
A60 Double leaf hinged door - type HB-HH

Issued to

Baggerød AS
HORTEN, Norwayis found to comply with
DNV GL offshore standards
DNV GL rules for classification – Ships
DNV GL statutory interpretations DNVGL-SI-0364 – SOLAS interpretations**Application :****Approved for use as an integrated part of fire retarding division 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 **2017-05-15**This Certificate is valid until **2022-05-14**.DNV GL local station: **Sandefjord**for **DNV GL**Approval Engineer: **Ginevra Giustiniani**

Marte Eknæs Edvardsen
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

"A60 double leaf hinged door – type HB-HH"

is a door construction consisting of a double leaf hinged steel door in a steel frame with a passive and an active door leaf with dimensions of 1254.5 mm x 2355 mm and 1323 mm x 2355 mm respectively.

Each door leaf is composed of 1.5 mm thick steel plates on each side of an insulation core, one on the exposed and one on the unexposed side. The insulation core of the door leaf is composed of 2 layers of Superwool 607 Plus Blanket (nominal density 128 kg/m³) produced by Thermal Ceramics. The thickness of the layers is 38 mm and 25mm. Adhesive is used for the fixation of insulation. Each door leaf contains two steel L- stiffeners with dimensions 20 x 40 x 2 mm welded to the exposed steel sheet on the inside of the door leaf. The active doorleaf is equipped with a stainless steel lock with handle. The passive door leaf is equipped with two shoot bolts.

Total thickness of door leaf: 63mm.

Each door leaf is fitted to the door frame with 3 hinges. The door frame is fixed to the steel bulkhead using M8 x 30 mm bolts and may also be welded to the bulkhead.

The active door leaf may incorporate a 27 mm thick window from Pilkington Pyrostop in the upper half of the door. The window frame is fixed in the door leaf by screws. Along the edges of the window 5 mm thick insulation from Superwool Plus paper is used and 30x20 mm Promatect H (nominal density 940 kg/m³) is used around the glass pane inside the door leaf.

For further details see test reports and drawings listed under Type Approval documentation below.

This product may also be produced at the premises of:

- UAB Norac, Pramones g. 3, Panevėžys, Lithuania.

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 passive (right) door leaf:	1254.5 mm x 2355 mm (w x h)
Max. size of active (left) door leaf:	1323 mm x 2355 mm (w x h)
Max. size of door clear opening:	2400 mm x 2300 mm (w x h)
Max. size of window clear opening:	200 mm x 500 mm (w x h)

Any surface materials used have to be approved for smoke and toxicity and low flame spread characteristics (IMO 2010 FTP Code parts 2 and 5 or IMO FTPC Parts 2 and 5 when in compliance with the 2010 FTP Code Ch. 5.2 and 8) when required according to relevant rules and regulations.

Any adhesive used, other than the one used during testing, has to be tested for low flame spread characteristics according to IMO 2010 FTP Code part 5.

A fire door of marginally larger dimensions than a fire-tested fire door may be individually assessed and accepted by Flag Administration (or Recognized Organization acting on its behalf) for a specific project with the same classification, provided documented compliance with IMO MSC.1/Circ.1319.

External windows to comply with ISO 3903 (Ref. DNV GL rules for classification: Ships, Pt.3, Ch.12, Sec.6 [1.1.4]).

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

Job Id: **262.1-025650-1**
Certificate No: **TAF00000MW**

Type Approval documentation

Certification in accordance with Class Programme DNVGL-CP-0338, October 2015.

Test reports:

- Test report no. PGA10664 dated 2015-04-20 from Danish institute of Fire and Security Technology (DBI), Denmark.
- Test report no. 150071-07A:01 dated 2016-01-08 from SP Fire Research, Norway.

Assessment report:

- Fire technical assesment report no. 150101-11:01 dated 2016-02-12 from SP Fire Research, Norway.

Drawings from the manufacturer:

- Drawing no. 19865-001 Rev.2 (A60 single leaf double hinged door HB-HH) dated 2015-05-05
- Drawing no. 19865-101-400 Rev.0 (passive door leaf) dated 2015-10-19
- Drawing no. 19865-101-300 Rev.0 (active door leaf) dated 2015-10-20
- Drawing no. 19865-101-100 Rev.0 (HB-HH door frame) dated 2015-10-19
- Drawing no. 19865-101 Rev.0 (clear opening) dated 2015-10-19

Tests carried out

Tested according to IMO 2010 FTP Code Part 3.

The door has been successfully tested with extended test period of 69 minutes in compliance with IMO MSC.1/Circ. 1319.

Marking of product

The product 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 listed in this certificate is in accordance with Transport Canada's requirements.

Periodical assessment

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.