



Certificate No:
TAF00001JR

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Class A Door

with type designation(s)
Class A-60 Door Type "Tür 1810 x 910 A60-Modifikation"

Issued to
thyssenkrupp Marine Systems GmbH
Hamburg, Germany

is 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 resisting divisions of class A-60.

Max. size of clear opening is 910 x 1810 mm (width x height).

This certificate is recognized by Transport Canada.

Product approved by this certificate is accepted for installation on all vessels classed by DNV GL.

Issued at **Hamburg** on **2021-05-25**

This Certificate is valid until **2026-05-24**.

DNV local station: **Hamburg – CMC North/East**

for **DNV**

Approval Engineer: **Timo Linn**

Jörg Kallies
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.

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.



Form code: TA 251

Revision: 2021-03

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Product description

"Tür 1810 x 910 A60-Modifikation" is a single leaf door of maximum size 949 x 1849 mm (width x height). The door leaf is composed of a 4 mm thick steel plate forming the unexposed side of the door. A steel profile is welded to the perimeter of the plate, forming the side of the door leaf. The door leaf is reinforced internally with a framework of two vertical and five horizontal stiffeners. A 2 mm thick steel plate is forming the exposed side of the door.

Maximum clear opening dimension is 910 x 1810 mm (width x height).

The door has been successfully fire tested with both sides towards the fire, hence it may be installed with either side towards the fire exposure.

Insulation of type "ISOVER-marine slab ULTIMATE U MPA 66" (manufactured by Saint-Gobain Isover G+H AG), with nominal density 66 kg/m³ is fitted inside the door leaf between the stiffeners. Total door leaf thickness is 66 mm.

The door is fitted with three hinges fastened to the 4 mm steel plate on the unexposed side. The locking system consists of a steel hand lever on both sides of the door, internal steel connections and 7 point latch locking system.

The door is installed in a frame made of 6 mm thick steel profiles which may be welded or bolted to the bulkhead.

Adhesive of approved type is used between the door frame and the bulkhead, as well as between the door plates.

Additional horizontal stiffeners are fitted in the bulkhead, two at each side of the door frame and one above the door frame.

For further details, see drawings mentioned under Type Approval 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.

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.

Max. size of door leaf: 949 x 1849 mm (W x H).

Max. size of clear opening: 900 x 1810 mm (W x H).

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. DMT-DO-53-020 and DMT-DO-53-021 both dated 2014-05-21 from DMT GmbH & Co. KG, Germany.

Insulation and structure is illustrated in drawing No. 999999 16720 K 1200 B, 999999 16720 K 1201 B, 999999 16720 K 1260 A, 999999 16720 K 1261 B, 999999 16720 K 1001 C, 999999 16720 K 1004 E, 999999 16720 K 1030 H.

Certificate has been renewed based on the MED B Certificate 1111714 HH

Tests carried out

Tested according to IMO Res. MSC.307(88) – 2010 FTP Code Annex 1, Part 3

Marking of product

The product is to be marked with name and address 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



Job Id: **262.1-034600-1**
Certificate No: **TAF00001JR**

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.