Certificate No:
TAS000023D

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Spray tight Door

with type designation(s)
Spray tight steel door NP91ST and aluminium door NP91AL

Issued to
Varde AS
Kristiansund, Norway

is found to comply with
DNV GL rules for classification – Ships

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL. See limitations on page 2

Issued at **Høvik** on **2019-09-05**
This Certificate is valid until **2024-06-30**.
DNV GL local station: **Norway CMC, Mid-North**

Approval Engineer: **Xiaolu Wu**

for **DNV GL**

Arild Rogne
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.

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Product description

For aluminium door (material 5754 – H111):

Nominal size (mm)	Toggles	Max design pressure (kN/m^2)
680 x 1680	2 toggles + 2 hinges	19

For mild steel door (material NV A/S235JR):

Nominal size (mm)	Toggles	Max design pressure (kN/m^2)
680 x 1680	2 toggles + 2 hinges	31

- The door may be insulated and panelled on the inside.
- The door may have connected toggles or freestanding toggles.
- The door may be delivered with the following extra equipment:
    - Window (500 x 350mm for breadth > 600mm, 700 x 400mm for breadth > 650mm and max design pressure not exceeding 29 kN/m^2)
    - Lock

Application/Limitation

The doors have been Type Approved with respect to tightness only. The doors have not been considered with respect to fire protection.

Spray tight doors are not to be fitted in a bulkhead that protects spaces that are to provide reserve buoyancy. I.e. they are not to be fitted in locations where DNVGL Ship Rules Pt. 3 Ch. 12 Sec. 2, 4 and Sec. 3, 4.3, July 2019 require weathertight doors and watertight doors.

The door is not be fitted in a bulkhead where the design pressure is greater than indicated in the table above. Window can be only fitted in doors where the design pressure is smaller than max. design pressure for the window.

Aluminium doors may not be fitted in galley, engine-casing etc., which may be considered as spaces of greater fire risk.

A door with lock that requires keys is not permitted used in escape routes.

Dimensions of the light opening of the doors can be smaller than shown on the drawings, provided that scantlings, maximum distance between the cleats and fabrication method and material are maintained. The Type Approval does not cover the support of the doors in the bulkheads, which is subject to approval. Drawings showing connection between door frame and bulkhead shall be submitted for case-by-case approval by yard/end user.

Due consideration shall be given to the cut out for the door/ installation of the door if located in highly stressed areas or areas critical to fatigue.

Type Approval documentation

Marking of product

The product is to be marked with the following info:
- Manufacturer’s name or brand
- DNVGL Type Approval Certificate No. TAS000023D
- Type designation
- Max allowable design pressure as specified above

Periodical assessment

DNVGL surveyor has the permission to perform Certification Retention Survey at any time during the validity period of this certificate.

Periodical assessment shall be required after two years (+/- 90 days) and after 3.5 years (+/- 90 days) to verify that the conditions for the approval are complied with. Reference is made to DNVGL-CP-0338.