Certificate no.:
TAS00003WR

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Watertight Door

with type designation(s)
SPMS-AL-WT-GT-DOOR

issued to
Spectoms Engineering Pvt Ltd
Baroda, Gujarat, **India**

is found to comply with
DNV rules for classification – Ships
DNV rules for classification – High speed and light craft

Application:

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

Issued at **Høvik** on **2025-08-04**
This Certificate is valid until **2030-08-03**.
DNV local unit: **India CMC MES**

for **DNV**

Approval Engineer: **Grzegorz Wolski**

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 USD 300 000.

Product description

SPMS-AL-WT-GT-DOOR
Is a door fabricated from 5.0 mm thick aluminium main plate. Plate is reinforced by up to nine stiffeners 40 x 40 x 4 mm welded to the main plate by staggered welding. Edge of door is stiffened by gasket rim welded at 90-degree angle to the main plate. Door is of single acting type with up to twelve linked toggles and handle mounted close to non-hinged edge of door.

Application/Limitation

The following table describes the standard watertight doors.

Light opening (W)	Light opening (H)	Toggle and hinge T+H	Toggle spacing [mm]	No. of stiffeners	Stiffener spacing [mm]	Chosen plate stiffener	Pressure [kN/m^2]	Side scuttle Max Ø [mm]
765	1680	10+3	700	3	400	40x40x4	35	360
915	1680	10+3	700	3	500	40x40x4	35	360
985	1990	14+4	700	3	600	40x40x4	35	450

The doors have been Type Approved with respect to watertightness only, i.e. fire integrity has not been considered.

The watertight doors are found to comply with DNV-RU-SHIP July 2021 Pt.3 Ch.12 Sec.3 [4.3] and Sec. 6 for doors with installed window or side scuttle.

The design pressure at the location where the doors without window/side scuttle are to be fitted shall be equal or less than the pressure above.

The Ø360 mm side scuttle, with 19.0 mm toughened safety glass, is approved for a max design pressure of 35 kN/m².
The Ø450 mm side scuttle, with 19.0 mm toughened safety glass, is approved for a max design pressure of 35 kN/m².

For doors with window/side scuttle, the maximum pressure rating is to be taken as the lowest value of the applicable door and window/side scuttle design pressure based on the above values.

Window and side scuttle may not be fitted in watertight doors that are located below the freeboard deck.

The Type Approval does not cover the supporting structure of the doors, which is subject to approval. Interface showing door frame and bulkhead shall be submitted for case-by-case approval by yard/end user.

Consideration shall be given if located in highly stressed areas or in areas critical to fatigue from global hull loads. The door frame may be welded or bolted to the bulkhead.

Indication open/closed for the watertight door shall be fitted on the bridge.

Type Approval documentation

Drawing No. DD10014 rev.01 dated 19 February 2025 from manufacturer.
Drawing No. DD10015 rev.01 dated 19 February 2025 from manufacturer.
Drawing No. SEPL-DW-61425 rev.01 dated 19 February 2025 from manufacturer.
Drawing No. SEPL-DW-61446 rev.01 dated 19 February 2025 from manufacturer.
Drawing No. SEPL-DW-61423 rev.01 dated 19 February 2025 from manufacturer.
Drawing No. SEPL-DW-61426-A rev.01 dated 19 February 2025 from manufacturer.
Drawing No. SEPL-DW-61426-B rev.01 dated 19 February 2025 from manufacturer.
Drawing No. SEPL-DW-61424 rev.01 dated 19 February 2025 from manufacturer.
Drawing No. SEPL-DW-61427 rev.01 dated 19 February 2025 from manufacturer.

Tests carried out

Each door is to be tested for tightness through hydrostatic testing to design pressure.

Marking of product
The product is to be marked with the following info:
- Manufacturer's name or brand Spectoms Marine Systems
- DNV Type Approval Certificate No. TAS00003WR
- The specific type designation: SPMS-AL-WT-GT-DOOR

Periodical assessment
DNV surveyor has the permission to perform Certification Retention Survey at any time during the validity period of this certificate. Periodical assessment will 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 DNV-CP-0338.

Manufactured by:
Spectoms Marine Systems PVT. LTD., Vadodara, India.

Manufacturers/production sites not listed here shall be assessed by DNV in accordance with DNV CP-0338 prior to manufacturing of products to this TA certificate, and a request for update of the TA certificate shall be submitted to DNV for addition/change of production sites as relevant.