Certificate no.:
TAS000048S

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Splashtight Door

with type designation(s)
HERA Aluminum Systems 2000S

issued to
PANTAZIS DIM.ANTONIOS (VALVIS COMPANY)
Megara, **Greece**

is found to comply with
DNV rules for classification – Ships

Application:

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

Size	**1950 mm x 2150 mm**
Pressure (kN/m²)	**2.5**

Issued at **Høvik** on **2024-04-10**

This Certificate is valid until **2029-04-09**.

for **DNV**

DNV local unit: **Piraeus**

Approval Engineer: **Grzegorz Wolski**

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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.

Product description

HERA Aluminium Systems 2000S,
Are aluminium framed sliding glass doors. Aluminium profiles are extruded and connected to each other by pressure fitting. Elastron rubber is used as seal between glass and aluminium frame. Same rubber is used as seal between aluminium and aluminium profiles. MMS 999 is used as the sliding mechanism.

Maximum size (single leaf):	1000 mm x 2150 mm (width x height)
Maximum size (double leaf):	1950 mm x 2150 mm (width x height)
Minimum glass thickness:	6.0 mm + 3.0 mm (toughened + laminated glass)

Application/Limitation

The splash tight sliding doors are found to comply with DNV-RU-SHIP July 2022 Pt.5 Ch.4 for balcony doors.

Doors are designed to be used on cruise ships above position 2 as defined in International Convention on Load Lines, 1966, as amended by the 1988 Protocol by res. MSC.143(77) in 2003, Annex I, Chapter II, Regulation 13: Position of hatchways, doorways, and ventilators.

Consideration shall be given if located in highly stressed areas or in areas critical to fatigue from global hull loads.

The door frame is to be welded to the bulkhead.

The complete installation of new product shall be function and leak tested according to DNV-RU-SHIP-Pt.2 Ch.4 Sec.8 July 2023.

Type Approval documentation

Test report no. 596/2024/ΔKK-01 of ΔEH Innovation hub.
Drawing number Ref.2024/2000S REV.01S dated Nov. 2023 from manufacturer.

Tests carried out

Strength test at 0.25 ton/m^2, Leak test, visual inspection, dimensional control.

Marking of product

The product is to be marked with the following info:
- Manufacturer’s name or brand
- DNV Type Approval Certificate No. TAS000048S
- The specific type designation

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.