Certificate no.:
TAF00001Y2

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Class A and B Penetration

with type designation(s)
DS

issued to
Douwo Sealing Technology (Guangdong) Co.,Ltd
Dongguan City, Guangdong Province, China

is found to comply with
DNV statutory interpretations DNV-SI-0364 – SOLAS interpretations, Edition July 2021
DNV rules for classification – Ships
DNV offshore standards

Application:

Approved for use as a cable penetration system in class A-60 bulkheads and decks.

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

Issued at **Høvik** on **2024-12-02**
This Certificate is valid until **2029-12-01**.
DNV local unit: **China South NB**

for **DNV**

Approval Engineer: **Helge Bjørnarå**

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

"DS",
is a rectangular multicable penetration system composed of a clamping piece, partition boards and modules of rubber inserted into a steel frame of type DS in sizes 1, 2, 4, 6 and 8. Partition boards are inserted between each layer of modules.

The frame is to be welded to the division.

Application/Limitation

Approved for use as cable penetrations system in class A-60 bulkheads and decks for approved ship cables. Other applications are subject to case-by-case approval.

Class A-0, A-15 and A-30 shall be insulated as Class A-60 and in addition the division is to be insulated at least 200 mm around the penetration.

Approved cable penetration in A-60 steel bulkhead:

Type	Size	Max. cable diameter [mm]	Sleeve length [mm]	Sleeve thickness [mm]	Sleeve position	Sleeve insulation
DS	1x1 – 8+8x6	86	60	10	Symmetric	Fully insulated.

Approved cable penetration in A-60 steel deck:

Type	Size	Max. cable diameter [mm]	Sleeve length [mm]	Sleeve thickness [mm]	Sleeve position	Sleeve insulation
DS	1x1 – 8+8x6	86	60	10	Symmetric	Fully insulated on the underside.

Approved for use as cable penetration in steel bulkheads or decks limited to a pressure of 2.67 bar watertightness and 2.0 bar airtightness.

The penetration system is not to be used for penetrating boundaries of tanks.

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

Type Approval documentation

Certification in accordance with Class Programmes DNV-CP-0338, September 2021.

Fire test:
Test report No. SDFS2308004451RS dated 2 January 2024 from SGS, Shunde District, Foshan, Guangdong, China.
Test report No. SDFS2310006324RS dated 24 January 2024 from SGS, Shunde District, Foshan, Guangdong, China.
Test report No. SDFS2310006325RS dated 24 January 2024 from SGS, Shunde District, Foshan, Guangdong, China.

Drawing No. DHMF-DS-A60-01 dated 28 October 2022 from manufacturer.

Pressure test:
Test report No. DHMF20241031001 dated 31 October 2024 from manufacturer.

Tests carried out

Tested in accordance with IMO 2010 FTP Code part 3.

Marking of product

The product or packing is to be marked with name of manufacturer, type designation and fire-technical rating.

Periodical assessment

DNV'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 DNV-CP-0338, Section 4.