



Certificate No:
TAF00001TV

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Class A and B Penetration

with type designation(s)
Multi Cable Transit system - FR series

Issued to

Shanghai Fan You Sealing Technology Co., Ltd
SHANGHAI, 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 multi cable penetration system in class A-60 steel bulkheads and decks.

This certificate is recognized by Transport Canada.

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

Issued at **Høvik** on **2023-07-05**

This Certificate is valid until **2028-07-04**.

DNV local unit: **Shanghai**

for **DNV**

Approval Engineer: **Helge Bjørnara**

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Jowita Permoda
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: 2022-12

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Product description

Multi Cable Transit system - FR series, consists of round steel sleeve in sizes 60 to 219 mm (OD) of depth 74 or 80 mm, filled with FR frame, which is filled with 60 mm deep EPDM rubber modules. Sleeve is welded on the top side of the deck and on the insulated side of the bulkhead.

For further details, see drawings listed under Type Approval documentation below.

Application/Limitation

Approved for use as a multi cable penetration system in class A-60 steel bulkheads and decks. 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
FR	50 - 200	38	74 - 80	4.5 - 9	Insulated side	Partially 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
FR	50 - 200	38	74 - 80	4.5 - 9	Top	Partially insulated on underside

Approved for water- and gastightness up to a design pressure of 2.67 bar (test pressure of 4.0 bar).

The penetration systems shall not be used for penetrating boundaries of tanks.

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

Type Approval documentation

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

Test report No. FT13045 dated 1 March 2013 from FEFTC, Shanghai, China.

Test report No. FT13046 dated 4 March 2013 from FEFTC, Shanghai, China.

Letter dated 26 February 2018 from FEFTC, Shanghai, China.

Drawing No. FCS06 dated 26 January 2018 from manufacturer.

Drawing No. FCS2012-B-7 dated 30 January 2013 from manufacturer.

Drawing No. FCS2012-B-9 dated 30 January 2013 from manufacturer.

Drawing No. FCS2012-D-7 dated 30 January 2013 from manufacturer.

Drawing No. FCS2012-D-9 dated 30 January 2013 from manufacturer.

Watertight and gastight:

Test report dated 18 July 2005 from manufacturer.

Test report No. ST1301 dated 1 February 2013 from manufacturer.

Test report dated 10 November 2017 from manufacturer.

Tests carried out

Tested according to IMO 2010 FTP Code Part 3.

Pressure test with water and air according to DNVGL-CP-0165.

Marking of product

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

Transport Canada Approval

Based on the procedures laid down in the Transport Canada publication entitled "Procedures for Approval of Life-Saving Appliances, Fire Safety Systems, Equipment and Products (TP14612)", DNV confirms that the product/s listed in this certificate is/are in accordance with Transport Canada's requirements.

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.