DNV·GL

Certificate No:
TAF00000WN

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Class A and B Penetration

with type designation(s)
MPACT Wrap Strip Tuck-In with MFS Firestop Sealant

Issued to
Specified Technologies Inc.
Somerville NJ, USA

is found to comply with
DNV GL rules for classification – Ships
DNV GL offshore standards
DNV GL class programme DNVGL-CP-0165 – Type approval – Cable and pipe penetrations
DNV GL statutory interpretations DNVGL-SI-0364 – SOLAS interpretations

Application :

Approved for use as a single pipe 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 GL.

Issued at **Høvik** on **2018-04-18**
This Certificate is valid until **2023-04-17**.
DNV GL local station: **Certification & Inspection Services**

Approval Engineer: **Tessa Biever**

for **DNV GL**

Mårten Schei-Nilsson
Head of Section

Product description

MPACT Wrap Strip Tuck-In with MFS Firestop Sealant
is a single pipe penetration consisting of a minimum 127 mm long mild steel sleeve welded to the deck/bulkhead. The sleeve has a min. thickness of 3 mm and is fitted symmetrically to the bulkhead and on exposed side of the deck.

Single pipes passing the penetration are of non-metallic material as specified in table 1 and 2. Two layers of STI MPACT Wrap Strip (min. 51 width and 6.3 mm thick) are installed tight to the pipe and recessed from the end of the sleeve by min. 12.7 mm in order to accommodate for the MFS Firestop sealant. A min. of 12.7 mm thick MFS sealant is applied on both sides of the sleeve.

A-60 bulkhead insulation:
The sleeve is to be fully insulated on one side and partially insulated on the other side, both with A-60 mineral wool (min. density 96 kg/m^3). The insulation material is pinned to the bulkhead. The insulation is extending min. 75 mm around the sleeve. For PE & CPVC pipes between Ø16 mm - Ø141.3 mm (OD) installed in steel transit sleeves with Ø89 - Ø169 mm require min. 75mm thick insulation block to extend min. 100 mm around the sleeve.

A-60 deck insulation:
When the sleeve is fitted to the exposed side (flush), the whole sleeve shall be insulated on the underside with A-60 mineral wool (min. density 96 kg/m^3). When the sleeve is fitted symmetrically (centered), the insulation to extend under end of sleeve maintaining min. 75 mm thickness. The insulation material is pinned to the bottom of the deck. The insulation is extending min. 75 mm around the sleeve.

More information about approved sizes, materials and application are given in the table 1 and table 2 and in the drawing mentioned under "Type Approval documentation" below.

Table 1 : A-60 bulkhead

Pipe material	Ø OD sleeve [mm]	Min. sleeve length [mm]	Min. thickness sleeve [mm]	Way of installation	Ø OD pipe [mm]	Thickness pipe [mm]
ABS	89 -219	127	3 - 3.8	Sym	16 - 169	1.7 - 6
PE100	89 - 219	127	3 - 3.8	Sym	16 - 160	2.3 - 10.2
PP	89 - 219	127	3 - 3.8	Sym	20 - 169	3.1 - 11.6
PB	89 - 219	127	3 - 3.8	Sym	16 - 160	2.2 - 15.2
PPr	89 - 219	127	3 - 3.8	Sym	20 - 160	3.1 - 15.3
PVC	89 - 219	127	3 - 3.8	Sym	16 - 169	1.7 - 11
CPVC	89 - 219	127	3 - 3.8	Sym	16 - 169	1.7 - 11
uPVC	89 - 219	127	3 - 3.8	Sym	16 - 169	1.7 - 7

Table 2 : A-60 deck

Pipe material	Ø OD sleeve [mm]	Min. sleeve length [mm]	Min. thickness sleeve [mm]	Way of installation	Ø OD pipe [mm]	Thickness pipe [mm]
CPVC	89 - 219	127	3 - 3.8	Symmetrical to exposed	16 - 169	1.7 - 11
PP	89 - 219	127	3 - 3.8	Symmetrical to exposed	21 - 169	3.7 - 11.6
ABS	89 - 219	127	3 - 3.8	Symmetrical to exposed	16 - 169	1.7- 7.1
PE	89 - 219	127	3 - 3.8	Symmetrical to exposed	16 - 160	1.7 - 9
uPVC	89 - 219	127	3 - 3.8	Symmetrical to exposed	16 - 169	1.2 - 7.1
PVC	89 - 219	127	3 - 3.8	Symmetrical to exposed	16 - 169	3.4 - 7.1
PB	89 - 169	127	3 - 3.8	Symmetrical to exposed	32 - 90	2.9 - 10
PPr	89 - 219	127	3 - 3.8	Symmetrical to exposed	20 - 160	1.9 - 14.6

Application/Limitation

Approved for use as a single pipe penetration system in A-60 steel bulkheads and decks. Other applications are subject for case by case approval.

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

Water and gas tightness:
Approved for water tightness up to a design pressure of 0.133 MPa (1.33 bar), test pressure - 0.20 MPa (2.0 bar).
Approved for air tightness up to a design pressure of 0.067 MPa (0.67 bar), test pressure - 0.10 MPa (1.0 bar).

Penetration systems are not to be used for penetrating boundaries of tanks.

Extent of application is to be considered and accepted for each case/project.

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

Type Approval documentation

Tests carried out

Tested in accordance with IMO 2010 FTP Code Part 3.

Transport Canada Approval

Based on the procedures laid down in the Transport Canada Publication entitled "Approval Procedures for, Life Saving Equipment and Structural Fire Protection Products (TP 14612)", DNV GL confirms that the product listed in this certificate is in accordance with Transport Canada's requirements.

Periodical assessment

DNV GL'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 DNVGL-CP-0338, Section 4.

Marking of product

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