

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Class A and B Penetration**with type designation(s)
STI EZ-PATH 400 Marine Fire Rated Pathway

Issued to

Specified Technologies Inc.
Somerville, NJ, USAis found to comply with
DNV GL offshore standards
DNV GL rules for classification – Ships
DNV GL statutory interpretations DNVGL-SI-0364 – SOLAS interpretations**Application :****Approved as A-60 cable penetration in 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 **2019-05-13**This Certificate is valid until **2024-05-12**.for **DNV GL**DNV GL local station: **Certification & Inspection Services**Approval Engineer: **Tessa Biever**

Mårten Schei-Nilsson
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.



Product description

"STI EZ-PATH 400 Marine Fire Rated Pathway"

consisting of a minimum 356 mm long steel sleeve, rectangular shaped with maximum dimensions of 100x115 mm (width x height). The thickness of the steel sleeve is minimum 1,6 mm.

The penetration system may also be installed in decks as a grid of sleeves with two or four (in a row) sleeves together, the sleeves are fastened to each other.

The sleeve is not symmetrically installed in the bulkhead/deck, extending 278 mm out from the bulkhead on the exposed side and 78 mm on the unexposed side. For the deck, the sleeve is extending 78 mm on the upper side and 278 mm down from the deck on the under side.

Intumescent pads are fitted inside the steel sleeve, one on top of the other and fastened to the steel sleeve by steel lock tabs.

The steel sleeve is connected to a mounting plate made of steel, minimum thickness 4,8 mm, which is welded to the bulkhead/deck.

A fiberglass fabric with zipper is fastened with steel strips to the outside of the steel sleeve, thickness minimum 3 mm and length minimum 60 mm, strapped tight around the cables. The fabric is to be installed on the exposed side of the penetration.

Insulation details for deck:

The penetration is insulated on the top (unexposed) side by two layers of 310x320x75 mm (two layers of 630x320x75 mm for 1x4 grid). The insulation is fitted tight to the cables. The bottom (exposed) side of the penetration is insulated with one layer of 50 mm (in addition to deck insulation) covering the entire length of the pathway (cable transit).

Insulation details for bulkhead:

The penetration is insulated on insulated (unexposed) side with 310x320x75 mm and a 75 mm thick layer extending minimum 75 mm past the edge of the sleeve. The insulation is fitted tight to the cables.

The insulation is made of mineral wool, A-60 approved type with minimum density 96 kg/m³.

The insulation blocks are pinned to the bulkhead or to the sides of the pathway (cable transit).

For further details see drawing listed under Type Approval documentation below.

Application/Limitation

Approved as A-60 cable penetration in steel bulkheads and decks. Other applications are subject for 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.

Cable filling rate: 0-100% visual cable fill or 0-44 % ("cross section of cables" per "clear opening area of sleeve").

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

Type Approval documentation

Certification in accordance with Class Programme DNVGL-CP-0338, Type Approval, September 2018.

Test Report Nos.:

- 4786049246.1.1 (deck and bulkhead test) dated 2013-09-10
- 4786299801 (grid test) dated 2014-01-30, page T1-69 dated 2014-08-14

Both from UL LCC, Northbrook, USA.

Job Id: **262.1-017271-3**
Certificate No: **TAF0000178**

Test Report No. 336038 and 336039 (test with fabric) both dated 2014-04-04 from Exova Warringtonfire, United Kingdom.

Assessment Report No. 4786311411 dated 2014-02-18 from Exova Warringtonfire, United Kingdom.

Drawing No. MP0033 dated 2019-05-03 from Specified Technologies Inc.

Tests carried out

Tested according to 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.

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/s listed in this certificate is/are 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.