DNV·GL

Certificate No:
MEDB00001A6

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED), issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Authority. This Certificate is issued by DNV GL AS under the authority of the Government of the Kingdom of Norway.

This is to certify:

That the Penetrations through "A" class divisions: pipe, duct, trunk, etc penetrations

with type designation(s)
SMT Fire Stop System-07

Issued to
SM Tech Co., Ltd.
Busan, Republic of Korea

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2015/559,**
Annex A.1, item No. A.1/3.26b and Annex B, Module B in the Directive; SOLAS 74 as amended, Regulation II-2/9, IMO MSC/Circ.1276 and IMO 2010 FTP Code

Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2022-01-08**.

Issued at **Høvik** on **2017-01-09**

DNV GL local station:
Pusan

Approval Engineer:
Fryderyk Hoga

Notified Body
No.: **0575**

for **DNV GL AS**

Vidar Dolonen
Head of Notified Body

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Product description

"SMT Fire Stop System-07"
Consist steel sleeve welded to the A-60 class bulkhead/deck. The centre of the steel sleeve is filled with intumescent strips, type 3M Ultra GS. Numbers of intumescent strips are depending on size of sealing system. On each side of the intumescent strips Artilon filler material (manufactured by Youngbo Chemical Co. Ltd,) is fitted. The sleeve is dammed on both sides with 10 mm fire sealant type 3M 1000NS from 3M Korea Co. Ltd.

For further details see approved drawing listed under type examination documentation.

Application/Limitation

Approved for use as PVC & Thermoplastic pipe penetration system in class A-0 and A-60 steel bulkheads and steel decks. Other applications are subject to case-by-case approval. Class A-15 and A-30 penetrations shall be insulated as class A-60 and in addition the division is to be insulated at least 200 mm around the penetration.

Thickness of steel sleeve with diameters between 32 and 216.3 mm are to be interpolated.

<table>
<tr><th>Type of pipe</th><th>Fire Class Division</th><th>Approved pipes sizes [mm]</th><th>Sleeve size (L x t) [mm]</th><th>Insulation/installation</th></tr>
<tr><td rowspan="5">PVC</td><td>A-60 Class Bulkhead</td><td rowspan="4">Ø18-140</td><td rowspan="2">Min: 180/200 x 3.7
Max: 180/200 x 8.2</td><td rowspan="2">Ref. drawing:
SMT-090729-01 Rev. 01</td></tr>
<tr><td>A-60 Class Deck</td></tr>
<tr><td>A-60 Class Deck</td><td rowspan="2">Min: 180 x 3.7
Max: 180 x 8.2</td><td>Ref. drawing:
From test report no. KOMERI-0402-15T2984
Specimen C, page 18 of 35
Specimen D, page 16 of 35
Specimen E, page 17 of 35
Specimen F, page 19 of 35</td></tr>
<tr><td>A-0 Class Deck</td><td>Uninsulated</td></tr>
<tr><td>A-0 Class Bulkhead</td><td>Ø18</td><td>180 x 3.7</td><td>Uninsulated</td></tr>
<tr><td rowspan="4">Thermoplastic pipes (PPR)</td><td>A-60 Class Bulkhead</td><td rowspan="2">Ø20-75</td><td rowspan="2">Min: 180/200 x 3.6
Max: 180/200 x 8.2</td><td rowspan="2">Ref. drawing:
SMT-090729-01 Rev. 01</td></tr>
<tr><td>A-60 Class Deck</td></tr>
<tr><td>A-60 Deck</td><td rowspan="2">Ø20-75</td><td rowspan="2">Min: 180 x 3.6
Max: 180 x 6</td><td>Ref. drawings:
From test report no. KOMERI-0402-15T2984
Specimen A, page 20 of 35
Specimen B, page 22 of 35
Specimen G, page 23 of 35
Specimen H, page 21 of 35</td></tr>
<tr><td>A-0 Class Bulkhead</td><td>Uninsulated</td></tr>
</table>

Watertightness and gastightness is not covered in this certificate.

The insulation material used has to be approved according to the Marine Equipment Directive and bear the Mark of Conformity.

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

Each product is to be supplied with its manual for installation and maintenance. The manual shall include the drawings mentioned under type examination documentation.

Type Examination documentation

Tests carried out

Tested according to IMO FTPC Part 3 and in compliance with IMO 2010 FTP Code Ch. 8 and according to IMO 2010 FTP Code part 3.

Marking of product

The product or packing is to be marked with name and address of manufacturer, type designation, fire technical rating, the MED Mark of Conformity and USCG Approval Number if applicable (see first page).