DNV·GL

Certificate No:
TAF00000KF

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Class H Penetration

with type designation(s)
RGP Cable penetration

Issued to
MCT Brattberg AB
KARLSKRONA, Sweden

is found to comply with
DNV GL offshore standards

Application :

Approved for use as a cable penetration in bulkheads and decks of class H (see application limitation page 2).

Issued at **Høvik** on **2017-02-13**
This Certificate is valid until **2022-02-12**.
DNV GL local station: **Malmö**

Approval Engineer: **Fryderyk Hoga**

for **DNV GL**

Petter Langnes
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.

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Product description

"RGP Cable penetration"
Circular cable transit system composed of a symmetrically fitted 10 mm steel casing, welded to the steel division on non-exposed side and filled with different number of MCT Brattberg transits blocks (from Lycron), Endpacking STG-1 with a compression plate or Endpacking PTG (presswedge).

Sleeve types: S, L and SFRB

For further details see approved drawings listed under type approval documentation.

Application/Limitation

Approved as H-0, H-60 and H-120 with insulation and specifications details in table below:

Deck penetrations general application			
Size	**Fire Class**	**Fitting of steel casing**	**Insulation**
RGP 50 to RGP 200	H-120	Uninsulated side	At least three layers of 50 mm thick H-120 insulation with density of at least 128 kg/m^3 fitted below deck.
Bulkhead penetrations general application			
Size	**Fire Class**	**Fitting of steel casing**	**Insulation**
RGP 50 to RGP 200	H-60	Symmetrically	Three layers of 50 mm thermal ceramics FireMaster 607 and 200 (on opposite side) mm wide strips of 25 mm thick blanket, covering the edge of each transits.
Restricted application fire against insulated side (bulkhead penetrations)			
Size	**Fire Class**	**Fitting of steel casing**	**Insulation**
RGP 70 to RGP 200	H-120	Uninsulated side	At least 150 mm thick H-120 insulation with minimum density of 128 kg/m^3.
RGP 50 to RGP 200	H-120	Symmetrically	At least 50 mm + 38 mm thick H-120 insulation with minimum density of 96 kg/m^3 or equivalent + one layer of 38 mm additional insulation 200 mm around the penetration.

H-0 and H-60 penetrations shall be insulated as H-120 with at least 200 mm around each penetration.

No more than 40% of the inside cross sectional area of each transit should be occupied by cables.

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

Type Approval documentation

Certification in accordance with Class Programme DNVGL-CP-0338, October 2015.

Test report Nos:
- 223949 dated 7 November 2005 (bulkhead) from BRE Testing, UK
- TE 82004 dated 20 January 1992 (deck) from the Loss Prevention Council, UK
- TE 82211 dated 12 May 1992 (bulkhead, restricted application) from the Loss Prevention Council, UK
- 232880 dated 7 November 2007 from BRE Testing, UK (bulkhead)

Assessment report No. CC 241401 dated 13 December 2007 from BRE Testing, UK

Drawing Nos: (all drawings from manufacturer)
- 004242 Rev. 0 dated 9 September 1992 (bulkhead, restricted application)

- 004243 Rev. 0 dated 9 September 1992 (deck)
- 1070312 Rev. A dated 15 October 2007 (bulkhead, general application)

Tests carried out

Tested according to IMO FTPC Part 3 (IMO Res. A.754(18)) and NPD HC fire load/temperature curve.

Marking of product

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

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.