



TYPE APPROVAL CERTIFICATE

Certificate No:
TAF00000KE
Revision No:
2

This is to certify:

That the Class H Penetration

with type designation(s)
RGS cable penetration - H-class

Issued to
MCT Brattberg AB
Karlskrona, Sweden

is found to comply with
DNV offshore standards

Application :

Approved for use as cable penetration system in H-class bulkheads and decks for approved ship cables.

Issued at **Høvik** on **2021-12-14**

This Certificate is valid until **2026-12-13**.
DNV local station: **Sweden CMC**

Approval Engineer: **Kristin Grønnæss**

for **DNV**

Helene David-Andersen
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.



Product description

RGS cable penetration – H-class, is a rectangular multi-cable penetration system consisting of a frame filled with MCT Insert Blocks (Standard Block, Handiblock, AddBlock, U-Block and Spareblock), Stayplates and STG Endpacking with compression plate or PTG Presswedge.

Frame type(s): RGS, RGSF, RGSFB, RGSC, RGSK, RGSbtb, RGSR and RGSFBO

Frame is to be welded to the division. RGSFB and RGSFBO may also be bolted (M12) to the division.

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

Application/Limitation

Approved for use as cable penetration system in H-class bulkheads and decks for approved ship cables. Other applications are subject to case-by-case approval.

Class H-0 and H-60 shall be insulated as for H-120 and the division is to be fitted with H-120 insulation for a minimum distance of 200 mm around the penetration.

Table 1: Approved cable penetration in H-120 steel bulkhead:

Type	Size	Max cable diameter [mm]	Frame length [mm]	Frame thickness [mm]	Frame position	Frame insulation	Dwg. No.
RGS ¹⁾	2 – 8x2	48	60	10	Unexposed or symmetrically	Partially insulated with H-120 on exposed side.	004252 004258
RGS ¹⁾	2 – 8x2	48	60	10	Symmetrically	Fully insulated with H-120 on exposed side.	
RGS	2 – 8x2	48	60	10	Symmetrically	Fully insulated with H-120 on one side and fully insulated with 50 mm thick on opposite side.	1070309
RGS	8+8+8+8+8x1	42	60	10	Symmetrically	Fully insulated with H-120 on one side and partly insulated with H-120 on opposite side.	1210224
RGS ¹⁾	1 – 8+8x5	100	60	10	Symmetrically	Fully insulated with H-120 and one additional layer on exposed side.	1210221
RGS ¹⁾	8+8x5 – 8+8x7	100	60	10	Symmetrically	Fully insulated with H-120 and two additional layers on exposed side.	1210222

1) Restricted application, fire against insulated side

Table 2: Approved cable penetration in H-60 steel bulkhead:

Type	Size	Max cable diameter [mm]	Frame length [mm]	Frame thickness [mm]	Frame position	Frame insulation	Dwg. No.
RGS	1 – 8x7	96	60	10	Symmetrically	Fully insulated with H-120 on one side.	
RGS	1 – 8+8+8+8+8x1	42	60	10	Symmetrically	Fully insulated with H-120 on one side.	1210223
RGS ¹⁾	8x2	90	60	10	Unexposed side	Partially insulated with H-120 on exposed side.	004252 004258

1) Restricted application, fire against insulated side

Table 3: Approved cable penetration in H-120 steel deck:

Type	Size	Max cable diameter [mm]	Frame length [mm]	Frame thickness [mm]	Frame position	Frame insulation	Dwg. No.
RGSK	2 - 8x2	48	120	10	Unexposed side	Partially insulated with H-120 on underside. Sleeve filled with insulation.	
RGS	2 - 8x2	90	60	10	Symmetrically	Fully insulated with H-120 on the underside.	1080809
RGS	1 – 8+8x7	50	60	10	Symmetrically	Fully insulated with H-120 and one additional layer on the underside.	1210225

Table 4: Approved cable penetration in H-0 steel deck:

Type	Size	Max cable diameter [mm]	Frame length [mm]	Frame thickness [mm]	Frame position	Frame insulation	Dwg. No.
RGS	2 - 8x7	96	60	10	Symmetrically	Partially insulated with H-120 on the underside.	004254

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

Type Approval documentation

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

- Test Report No. TE 82003 dated 5 February 1992 from LPC, UK.
- Test Report No. TE 82384 dated 18 June 1992 from LPC, UK.
- Test Report No. 61482 dated 30 June 1994 from Warrington Fire Research Centre, Warrington, UK.
- Test Report No. 219308 dated 23 March 2005 from BRE, Watford, UK.
- Test Report No. 220239 dated 8 February 2006 from BRE, Watford, UK.
- Test Report No. 223949 dated 7 November 2005 from BRE, Watford, UK.
- Test Report No. 223950A dated 7 November 2005 from BRE, Watford, UK.
- Test Report No. 228701 dated 5 January 2007 from BRE, Watford, UK.
- Test Report No. 228702 dated 15 January 2007 from BRE, Watford, UK.
- Test Report No. 232880 dated 7 November 2007 from BRE, Watford, UK.
- Test Report No. P101462-1003 dated 24 November 2016 from BRE Global, Watford, UK.
- Test Report No. P101462-1004 dated 30 May 2017 from BRE Global, Watford, UK.
- Test Report No. P101462-1012 dated 10 July 2020 from BRE Global, Watford, UK.

Assessment Report No. CC 241401 dated 13 December 2007 from BRE, Watford, UK.

Bulkhead:

- Drawing No. 004252 Rev. A dated 9 September 1992 from maker.
- Drawing No. 004258 Rev. A dated 9 September 1992 from maker.
- Drawing No. 1070309 Rev. A dated 19 October 2007 from maker.
- Drawing No. 1012221 Rev. A dated 5 August 2021 from maker.
- Drawing No. 1012222 Rev. A dated 5 August 2021 from maker.
- Drawing No. 1012223 Rev. A dated 5 August 2021 from maker.
- Drawing No. 1012224 Rev. A dated 5 August 2021 from maker.

Deck:

- Drawing No. 004254 Rev. A dated 9 September 1992 from maker.
- Drawing No. 1080809 Rev. A dated 15 October 2008 from maker.
- Drawing No. 1210225 Rev. A dated 5 August 2021 from maker.

Tests carried out

Tested according to IMO FTPC Part 3 (IMO Res. A.754(18)) with the hydrocarbon time-temperature curve specified in ISO 834-3.

Marking of product

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

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.