

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Class A and B Penetration**with type designation(s)
RGS cable penetration - A-class

Issued to

MCT Brattberg AB
Karlskrona, Sweden

is found to comply with

DNV GL statutory interpretations DNVGL-SI-0364 – SOLAS interpretations
DNV GL rules for classification – Ships
DNV GL offshore standards**Application :****Approved for use as cable penetration system in A-class steel and aluminium bulkheads and decks for approved ship cables.****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 **2021-02-23**for **DNV GL**This Certificate is valid until **2022-10-24**.DNV GL local station: **Sweden CMC**Approval Engineer: **Helge Bjørnarå****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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") 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.



Job Id: **262.1-033084-1**
 Certificate No: **TAF00000TJ**
 Revision No: **1**

Product description

RGS cable penetration – A-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 to the division.

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

Application/Limitation

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

Class A-0, A-15 and A-30 shall be insulated as for A-60 and the division is to be fitted with A-60 insulation for a minimum distance of 200 mm around the penetration.

Table 1: Approved cable penetration in A-60 steel bulkhead:

Type	Size	Max cable diameter [mm]	Frame length [mm]	Frame thickness [mm]	Frame position	Frame insulation	Dwg. No.
RGS	2 – 8+8x5	76	60	10	Symmetrically	Partially insulated on both sides.	1100887
RGS	8+8x5 – 8+8x7	76	60	10	Symmetrically	Partially insulated on one side and fully insulated on other side.	1100888
RGS ¹⁾	2 – 8+8x5	50	60	10	Unexposed side	Partially insulated on both sides.	1100891
RGS	8+8x5 – 8+8x7	76	60	10	Fully insulated side	Partially insulated on one side and fully insulated on other side.	1100892 1100894

1) Restricted application, fire against insulated side

Table 2: Approved cable penetration in A-60 steel deck:

Type	Size	Max cable diameter [mm]	Frame length [mm]	Frame thickness [mm]	Frame position	Frame insulation	Dwg. No.
RGS	1 – 8x9	76	60	10	Top side or Symmetrically	Partially insulated on underside.	1100889 1100895 1100897
RGS	1 - 8+8x7	76	60	10	Top side or Symmetrically	Fully insulated on underside.	1100890 1100896 1100898

Table 3: Approved cable penetration in A-0 steel bulkhead:

Type	Size	Max cable diameter [mm]	Frame length [mm]	Frame thickness [mm]	Frame position	Frame insulation	Dwg. No.
RGS	8	39	60	10	Symmetrically	Uninsulated.	1110971

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RGS ¹⁾	2 – 8+8x7	50	60	10	Symmetrically	Partially insulated on exposed side.	1100899
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1) Restricted application, fire against insulated side

Table 4: Approved cable penetration in A-60 aluminium bulkhead:

Type	Size	Max cable diameter [mm]	Frame length [mm]	Frame thickness [mm]	Frame position	Frame insulation	Dwg. No.
RGS	1 – 8+8x7	50	60	10	Symmetrically	Fully insulated on both sides.	1120502
RGS ¹⁾	1 – 8+8x5	50	60	10	Symmetrically	Fully insulated on exposed side and partially insulated on unexposed side.	1120503

1) restricted application, fire against insulated side

Table 5: Approved cable penetration in A-60 aluminium deck:

Type	Size	Max cable diameter [mm]	Frame length [mm]	Frame thickness [mm]	Frame position	Frame insulation	Dwg. No.
RGS	1 – 8+8x7	50	60	10	Symmetrically fitted	Fully insulated on the underside.	1120504

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

Type Approval documentation

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

Test Report No. 212563A dated 9 December 2003 from BRE Global, Watford, UK.
 Test Report No. 212565A dated 9 December 2003 from BRE Global, Watford, UK.
 Test Report No. 212564 dated 27 January 2004 from BRE Global, Watford, UK.
 Test Report No. 259264A dated 3 June 2010 from BRE Global, Watford, UK.
 Test Report No. 262822 dated 1 October 2010 from BRE Global, Watford, UK.
 Test Report No. 266413 dated 10 March 2011 from BRE Global, Watford, UK.
 Test Report No. 267923 dated 1 June 2011 from BRE Global, Watford, UK.
 Test Report No. 271351 dated 7 August 2012 from BRE Global, Watford, UK.
 Test Report No. 271353A dated 30 July 2012 from BRE Global, Watford, UK.
 Test Report No. 271353B dated 5 September 2012 from BRE Global, Watford, UK.
 Test Report No. 282342 dated 15 February 2013 from BRE Global, Watford, UK.
 Test Report No. 301124C dated 2 March 2016 from BRE Global, Watford, UK.
 Test Report No. P101462-1002 dated 8 August 2018 from BRE Global, Watford, UK.
 Test Report No. P101462-1001 dated 14 September 2018 from BRE Global, Watford, UK.
 Test Report No. P101462-1010 dated 27 November 2019 from BRE Global, Watford, UK.
 Test Report No. P101462-1015 dated 27 November 2019 from BRE Global, Watford, UK.

Assessment Report No. CC 269831 dated 21 April 2011 from BRE Global, Watford, UK.

Bulkhead:

Drawing No. 1100887 Rev. A dated 14 December 2010 from maker.
 Drawing No. 1100888 Rev. A dated 14 December 2010 from maker.
 Drawing No. 1100891 Rev. A dated 14 December 2010 from maker.
 Drawing No. 1100892 Rev. A dated 15 December 2010 from maker.
 Drawing No. 1100894 Rev. A dated 20 December 2010 from maker.
 Drawing No. 1100899 Rev. A dated 20 December 2010 from maker.

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Drawing No. 1100971 Rev. A dated 31 January 2011 from maker.
Drawing No. 1120502 Rev. A dated 9 October 2012 from maker.
Drawing No. 1120503 Rev. A dated 9 October 2012 from maker.

Deck:

Drawing No. 1100889 Rev. A dated 14 December 2010 from maker.
Drawing No. 1100890 Rev. A dated 14 December 2010 from maker.
Drawing No. 1100895 Rev. A dated 20 December 2010 from maker.
Drawing No. 1100896 Rev. A dated 20 December 2010 from maker.
Drawing No. 1100897 Rev. A dated 20 December 2010 from maker.
Drawing No. 1100898 Rev. A dated 20 December 2010 from maker.
Drawing No. 1120504 Rev. A dated 9 October 2012 from maker.

Tests carried out

Tested in accordance with IMO FTPC Part 3 and in compliance with IMO 2010 FTP Code Ch. 8 and 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 products listed in this certificate 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 DNVGL-CP-0338 Section 4.