



CERTIFICATE NUMBER	23-2395108-PDA
EFFECTIVE DATE	23-Jun-2023
EXPIRY DATE	22-Jun-2028
ABS TECHNICAL OFFICE	Houston OED - Safety

CERTIFICATE OF Product Design Assessment

This is to certify that a representative of this Bureau did, at the request of

MCT BRATTBERG AB

located at

SE-371 92 KARLSKRONA, , KARLSKRONA, Sweden

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

Product: Fire Stop System
Model: MCT Brattberg Cable and Pipe Transit System of type RGS in Jet Fire Resisting Divisions.
Endorsements:
Tier: 3 - Type Approved, unit certification not required

This Product Design Assessment (PDA) Certificate remains valid until 22/Jun/2028 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

American Bureau Of Shipping

Hyun Young Son,Engineer/Consultant

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010)

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Web: www.mctbrattberg.se

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Product: Fire Stop System

Model: MCT Brattberg Cable and Pipe Transit System of type RGS in Jet Fire Resisting Divisions.

Endorsements:

Intended Service:

Marine & Offshore Applications - Cable penetrations in steel Jet Fire Resisting Divisions.

Description:

Modular firestop transit system consisting of single and back to back rectangular frames, and multiple frame combinations, (utilizing halogen-free Lycron Standard, AddBlock, U-block, HandiBlock and EMI modules and accessories) welded in steel divisions.

Rating:

Jet Fire Rating as follows:

J60 & JF/Cable and Pipe Transit System/ 228/60 for back to back 200mm & JF/Cable Transit System/180/60 for back to back 300mm frame arrangements as indicated in drawings 140601 to 140606.

Maximum marine cable diameter 34mm

Maximum metallic pipe diameter 20mm

Insulation as indicated

J120 & JF/Cable and Pipe Transit System/ 159/120 for back to back 300mm frame arrangements as indicated in drawing 1160020.

Maximum marine cable diameter 110mm

Maximum metallic pipe diameter 30mm

Insulation as indicated

J30 High Heat Flux Test & JF/Cable and Pipe Transit System/ 82/30 for back to back 300mm frame arrangements as indicated in drawing 1160021.

Maximum marine cable diameter 110mm

Maximum metallic pipe diameter 30mm

Insulation as indicated

J45 & JF/Cable Transit System/ 191/45 for single frame with Chartek and mineral wool insulation as indicated in drawing 1170285.

Maximum cable diameter 100mm (marine & CLX type)

J30 & JF/Cable Transit System/ 191/45 for back to back frame with Chartek and mineral wool insulation as indicated in drawing 1110990.

Maximum cable diameter 100mm (marine & CLX type)

Service Restriction:

- 1) Unit Certification is not required for this product. If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.
- 2) The scope of Type Approval is to comply with MSC.1/Circ.1221 dated 11 December 2006. Continued compliance with the statutory requirements requires maintenance of full Type Approval (PDA+MA) status.
- 3) Not for use in tank boundaries.
- 4) Cable sizes and combinations are to be typical of marine installations.
- 5) Maximum cable and pipe sizes per Ratings section above.
- 6) All fire rated transits are to be fully insulated in accordance with manufacturer's installation instructions and ABS approved drawings.
- 7) Hydrocarbon fire resistance ratings are not covered under this PDA.

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8) Maximum size of multiple frame combinations shall be in accordance with applicable H-rated certificate.

Comments:

- 1) The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
- 2) Approval not performed on behalf of any flag Administration.
- 3) Production items are to be manufactured in accordance with a quality control system which shall be maintained to ensure that items are of the same standard as tested/approved prototype.
- 4) Product should be installed/used in accordance with manufacturer's instructions and limitations.
- 5) The bulkhead or deck shall be insulated in accordance with applicable regulations.
- 6) Installation of transits are only permissible where strength and fatigue characteristics are not diminished or where satisfactory structural compensation has been provided.
- 7) The method specified in ISO 22899-1 has been designed to simulate some of the conditions that occur in an actual jet fire. However, it cannot reproduce them all exactly. The results of this test do not guarantee safety but may be used as elements of a fire risk assessment for structures or plant. This should also take into account all the other factors that are pertinent to an assessment of the fire hazard for a particular end use. The test is not intended to replace the hydrocarbon fire resistance test but is seen as a complementary test.
- 8) A reduction factor must be applied to the current rating for cables laid close together in a bunch in accordance with 4-8-2/7.7.1 of the ABS MVR or 4-3-3/5.11 of the ABS MOU Rules.
- 9) Cables shall be type approved in accordance with 4-8-3/9 of the ABS MVR or 4-3-4/7 of the ABS MOU Rules.
- 10) Unless specifically directed by Administration, this approval is not to be construed as a substitute for Flag Administration's approval for the purpose of SOLAS as amended and IMO MODU Code amendment.
- 11) This certificate may not be used for EU and US flagged vessels and units (MED and/or USCG have their own specific requirements).
- 12) Individual review of the intended use on a specific vessel, MODU or facility is required.

Notes/Drawing/Documentation:

- 1) 140601, Rev. B, J60 RGS BTB 200mm FRAME.
- 2) 140602, Rev. 01, J60 RGS BTB 300mm FRAME.
- 3) 140603, Rev. B, J60 RGS BTB 200mm FRAME.
- 4) 140604, Rev. 01, J60 RGS BTB 300mm FRAME.
- 5) 140605, Rev. B, J60 RGS BTB 200mm FRAME.
- 6) 140606, Rev. 01, J60 RGS BTB 300mm FRAME.
- 7) 1110990, Rev. A, J30 RGS BTB 200mm FRAME W/ CHARTEK.
- 8) 1160020, Rev. A, J120 RGS BTB 300mm FRAME.
- 9) 1160021, Rev. A, J30 HHF RGS BTB 300mm FRAME.
- 10) 1170285, Rev. A, J45 191°C RGS SINGLE FRAME W/ CHARTEK.
- 11) Health and Safety Laboratory report PE02822 Jet Fire Resistance Test on 300 and 400 mm long 6RGS 8 + 8 Back to Back Cable Transits dated 1 July 2016.
- 12) SP Fire Research Report F15 20196:1 Resistance to Jet Fire with Increased Heat Load BTB 300/400 RGS BTB 8+8 dated 18 December 2015.
- 13) SwRI Report 01.16046.01.404 Fire Performance Evaluation of a Penetration System in Accordance with ISO 22899-1 dated January 10, 2011.
- 14) Health & Safety Laboratory Report PS/96/10 Jet-fire Resistance Test on MCT Brattberg 2000 Cable Transit Type RGS 8+8x1 BTB dated 5 July 1996.
- 15) Health & Safety Laboratory Affidavit Letter dated 6th April 2023 regarding Health & Safety Laboratory Report PS/96/10 dated 5 July 1996.
- 16) MCT Brattberg Manufacturer's Statement dated 12th April 2023 regarding SwRI Report 01.16046.01.404 dated 10 January 2011.

Terms of Validity:

This Product Design Assessment (PDA) Certificate remains valid until 22/Jun/2028 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

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STANDARDS

ABS Rules:

2023 Rules for Condition of Classification, Part 1, 1-1-4/7.7, 1-1-A3, and 1-1-A4, which covers the following:
2023 Rules for Building and Classing Marine Vessels 3-4-1

2023 Rules for Condition of Classification - Offshore Units and Structures, Part 1, 1-1-4/9.7, 1-1-A2, and 1-1-A3, which covers the following:

2023 Rules for Building and Classing Mobile Offshore Drilling Units, 5-1-1/3.5 & 3.19

2023 Rules for ABS Facilities on Offshore Installations 2-1 & 3-8

National:

NA

International:

Jet fire resistance test in accordance with ISO 22899-1:2021

Government:

NA

EUMED:

NA

OTHERS:

NA