



CERTIFICATE NUMBER 22-2241506-PDA
EFFECTIVE DATE 20-Apr-2022
EXPIRATION DATE 19-Apr-2027
ABS TECHNICAL OFFICE CN Shanghai ESD

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 Fire Stop Cable Transit Block System, "A", "B" & "F" Class Penetrations

This Product Design Assessment (PDA) Certificate remains valid until 19/Apr/2027 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

Bin-Hong Wang, Director

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

MCT BRATTBERG AB
SE-371 92 KARLSKRONA
KARLSKRONA
Sweden
Telephone: +46 455 37 52 00
Fax: +46 455 37 52 90
Email: Ola.fagerberg@mctbrattberg.se
Web: www.mctbrattberg.se

Tier: 3 - Type Approved, unit certification not required

Product: Fire Stop System
Model: Fire Stop Cable Transit Block System, "A", "B" & "F" Class Penetrations
Endorsements:

Intended Service:

Cable and pipe penetrations in Steel / Aluminium bulkheads and decks of fire Class A-0 through A-60, B-0 through B-30, and F-0 through F-30.

Description:

Transit Frame Types RGS, RGSO, RGSR, RGSFB, RGSF, RGSFBO, RGSK, RGSbtb, RGSC, RGSB.
Modular firestop transit systems for cables and pipes, installed in bulkheads and decks, utilizing halogen-free Lycron Standard, AddBlocks, Handiblocks, U-blocks, EMC modules, Stayplates and accessories.
Steel, Aluminum, or Polyester SMC framed transits for welding/bolting to deck or bulkhead plate, standard frame for marine applications, 120mm internal width, 60 mm depth, 10mm frame thickness; four size designations based on height - 2, 4, 6 and 8; mounted singly or in multiples.
Thick flange with or without removable end; used when hole in the bulkhead or deck is larger than the frame and when cables are already in place.

Rating:

Fire Resistance - bulkheads and decks to A60, B30 and F30
Water tightness: Standard blocks, AddBlocks, Handiblocks, and EMC Blocks -Tested up to 6 bar g.
Water tightness: Machined blocks to suit-non circular cables and water cut blocks -Tested up to 5 bar g.
Gas tightness: Standard blocks, AddBlocks, Handiblocks and EMC blocks- Tested up to 4 bar g.
Gas tightness: Machined blocks to suit -non circular cables and water cut blocks - Tested up to 3 bar g.

Service Restriction:

- 1) Not for use in tank boundaries.
- 2) Transits are to be insulated as tested for all fire division ratings. This penetration system is fully insulated system.
- 3) In all cases, cable sizes and combinations are to be typical of marine installations.
- 4) Maximum size of Marine cables tested : 76 mm diameter for bulkhead and 110 mm diameter for deck.
- 5) CLX cables up to 92 mm outside diameter tested and may be installed provided additional insulation is provided.
- 6) Maximum size of Steel pipes tested is 30 mm diameter.
- 7) Maximum tested single frame size 8x1
- 8) Minimum tested single frame size 1x 1
- 9) Maximum tested multiple frame size for general applications : Two frames of Size 8 arranged vertically and seven similar ones horizontally - designated as 8+8x7 (both in Steel & Aluminum).
- 10) For RGS 8+8+8x9, A-60 Steel Deck: Welded frame size from RGS 1(120mmx80mmx60mm, w/10mm thick) to RGS 8+8+8x9(889.5mmx1184.5mmx60mm w/10mm thick), 110mm DIA marine grade cable and 30mm DIA Stainless steel pipe(1.6mm wall thickness). Fully insulated with 110mm thick 97kg/m³ insulation.
- 11) For RGS BtB 8+8x7, A-0 Steel Bulkhead: Welded frame size from RGS 2(121mmx144.5mmx200mm, w/10mm thick on ends and 12mm thick on sides) to RGS 8+8x7(583mmx927.5mmx200mm w/10mm thick on ends and 12mm thick on sides), 50mm DIA marine grade cable and 100mm DIA CLX cable.
- 12) For RGSFB 8+8x3 with Handi Block 2 Insert Block, 100mm thick Panel Bulkhead(100mm thick mineral wool core, 144kg/m³, w/0.7mm galv steel facings both sides): Bolted frame size from RGSFB 2(121mmx141mmx60mm, w/10mm thick) to RGSFB 8+8x3(401mmx593mmx60mm w/10mm thick), 50mm DIA marine grade cable. Fully insulated with 75mm thick 102kg/m³ insulation on exposed side 200mm around.
- 13) Unit Certification is not required for this product. If the manufacturer or purchaser's request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined
- 14) For A-0 Steel Deck: Frame size RGS-2x1(140.5x121x60mm,10mm thickness), RGS-8x3(401.5x296.5x60mm, 10mm thickness), RGS-8x1 BTB(144.5x296.5x200mm, 12mm thickness), RGSFB-8x2(391x416.5mm).

MCT BRATTBERG AB
SE-371 92 KARLSKRONA
KARLSKRONA
Sweden

Telephone: +46 455 37 52 00

Fax: +46 455 37 52 90

Email: Ola.fagerberg@mctbrattberg.se

Web: www.mctbrattberg.se

Tier: 3 - Type Approved, unit certification not required

Comments:

- 1) The bulkhead or deck in way of the penetration is to be properly insulated in accordance with SOLAS II-2 Pt.C/Reg.9.3 (Consolidated Edition 2020) and the rating of the transit is to be the same or better than the bulkhead or deck in which it is installed.
- 2) Spare solid insert modules are to be used where cables or pipes are not located.
- 3) Installation is to be in accordance with manufacturer's instructions in the current MCT Brattberg Catalogue(ref internet), and also the limitations set forth herein.
- 4) The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
- 5) Approval not performed on behalf of any flag Administration.
- 6) The scope of Type Approval is to comply with MSC.1/Circ.1221 dated 11 December 2006.
- 7) Where pipes and cables penetrate bulkheads or decks which are required to be fire tight, smoke tight or watertight, the penetrations are to be made by approved methods which will maintain the same degree of fire tight or smoke tight integrity per ABS Marine Vessel Rules, 4-6-2/ 9.7, 4-8-3/21.13 or ABS Mobile Offshore Units Rules, 4-2-1/11.15, 4-3-3/5.13
- 8) This approval of penetrations passing through watertight bulkhead or deck is not to be construed as a substitute for flag Administration's approval for the purpose of SOLAS (Consolidated Edition 2020).
- 9) When requested to be used in watertight bulkheads or decks on passenger ships or special purpose ships, the penetration system has to comply with the requirements given in SOLAS (Consolidated Edition 2020), Ch. II-1 Reg. 13.2.3.
- 10) All penetrating cable should be type approved in accordance with 4-8-3/9 of the ABS Marine Vessels Rules or 4-3-4/7 of the ABS Mobile Offshore Units Rules.
- 11) For A-0 penetrations, any insulation fitted on an exposed side on the cable penetrations itself and 200 mm around will be required to be fitted also for A-0 class, unless it tested as A-0 class without insulation, per 2010 IMO FTP Code Annex 1, part 3, A.IV 2.2.1.1.

Notes/Drawing/Documentation:

Notes/Drawing/Documentation:

1) Test reports used as basis for this PDA listing:

BRE Global letter of 06 February 2013 comparing test report 262822 & 282342;

BRE Global Test reports 262822(01 Oct. 2010), 282342 (15 Feb. 2013), 271351 (07 August 2012), 271353A (30 July 2012), 271353B (05 Sep. 2012)

BRE, Fire & Risk Sciences Reports 259264A (2 Jun.2010), 266413 (10 March 2011), 267923 (1 Jun.2011);

MCT Brattberg AB test report nos 11201G, 11201W, 11202G, 11202W, 11213G, 11213W dated 15 June 2011.

Bre Global Test Report 290298, 8+8x7 BtB, A-0 BHD, dated 15 May 2014;

Bre Global Test Report P101462-1000, 8+8+8x9, A-60 DK, dated 8 September 2016;

Bre Global Test Report P101462-1006, 8+8x3, Panel BHD, dated 2 February 2018.

BRE Global, Comparison of performance Test Reports P101462-1006 Issue 1 dated 2 February 2018, P101462-1003 Issue 1, dated 24 November 2016 and P10462- 1004 Issue 1, dated 30 May 2017,

BRE Global Test Reports P101462-1010 Issue 1 dated 27 November 2019, P101462-1013 Issue 1 Dated 1 May 2020, P101462-1022 issue 1 dated 07 July 2020.

Pressure Test Report No.11201-A, RGS Standard Blocks, dated 13 October 2011;

Pressure Test Report No.11202-A, RGS Water Cut Blocks, dated 13 October 2011;

Pressure Test Report Number N141GRC2 dated 22 Nov 2017

IMO test of penetration seals in A0 steel deck Report No.O100409-170218-1 dated 25 Feb 2022 tested by RISE Research Institutes of Sweden AB

2) Manufacturer's drawing numbers:

For Steel division applications (Deck/Bulkhead):-

1200423 Rev A, 1200430 Rev A, 1200431 Rev A, 1200432 Rev A, 1200433 Rev A, 1200434 Rev A, 1200435 Rev A, 1200436 Rev A, 1200437 Rev A, 1200438 Rev A, 1200439 Rev A, 1200440 Rev A, 1200441 Rev A, 1200442 Rev A, 1200443 Rev A, 1200444 Rev A, 1200450 Rev A, 1200451 Rev A, 1220102 Rev A, 1220103 Rev A, 1220104 Rev A

For Aluminium division applications (Deck/Bulkhead):-

1200426 Rev A, 1200427 Rev A, 1200428 Rev A, 1200429 Rev A

MCT BRATTBERG AB
SE-371 92 KARLSKRONA
KARLSKRONA
Sweden

Telephone: +46 455 37 52 00

Fax: +46 455 37 52 90

Email: Ola.fagerberg@mctbrattberg.se

Web: www.mctbrattberg.se

Tier: 3 - Type Approved, unit certification not required

Terms of Validity:

This Product Design Assessment (PDA) Certificate remains valid until 19/Apr/2027 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.

STANDARDS

ABS Rules:

2022 ABS Marine Vessel Rules: 1-1-4/7.7, 1-1-A3, 1-1-A4, 4-6-2/9.7, 4-8-4/21.13, 4-8-4/29.15.

2022 ABS Mobile Offshore Units Rules: 1-1-A2, 1-1-A3, 1-1-4/9.7, 4-2-1/11.15, 4-3-3/5.13, 5-1-1/3.19(i).

National:

NA

International:

SOLAS (2020 Consolidated Edition), Chapter II-2 Pt.C/Reg.9.3,

IMO Resolution MSC.307(88) - (2010 FTP Code), Annex I: Part 3, adopted 3 December 2010.

Government:

NA

EUMED:

NA

OTHERS:

NA