



Marine & Offshore

Certificate number: 63792/A1 BV

File number: ACI4010/030/007

Product code: 5301H

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

ROXTEC International AB
KARLSKRONA - SWEDEN

for the type of product

PIPE PENETRATIONS IN FIRE DIVISIONS

A-0/A-60 Class Pipe Penetration sealing system with multidiameter™ technology - S-series (steel)
(certified products, frame position and achieved performance - see §1)

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships Part C Chapter 4
SOLAS 74, as amended, Regulations II-2/9.3.1
IMO Res MSC.307(88) (2010 FTP Code)
IMO MSC.1/Circ. 1488
IMO MSC.1/Circ. 1276

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 27 Jan 2026

For Bureau Veritas Marine & Offshore,
At BV GOTHENBURG, on 27 Dec 2024,
Hans-erik ERICSSON

This certificate was created electronically and is valid without signature



This certificate is recognized by Transport Canada

This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

A-0/A-60 Class Pipe Penetration sealing system with multidiameter™ technology - S-series (steel)

Consisting of Roxtec S-series steel frame (S, S EX, SF, SO, SFO, SR/T, SR/S, SRC r20, SRC r40, and SRC r60) in height 1-8 and width 60-120, and combinations thereof, **welded** to a steel section. The steel frame is filled with Roxtec halogen free RM modules[1]. Assembled with Roxtec wedge (standard, Ex or ES) and corresponding stay plates.

SK-series is an extra deep steel frame with single barrier (SK, SK Ex, SFK, SFOK, SFOHK, SRCK r20, SRCK r40, SRCK r60) **welded or bolted** to the steel section. The steel frame is fitted at one end with Roxtec halogen free RM modules*. Assembled with Roxtec Wedge (standard, Ex, ES or ES Ex) and corresponding stay plates.

SBTB-series is an extra deep steel frame with two barriers (SBTB, SBTB Ex, SFTB, SRBTB, SRCBTB r20, SRCBTB r40, SRCBTB r60) **welded** to the steel section. The steel frame is fitted at both ends with Roxtec halogen free RM modules*. Assembled with Roxtec Wedge (standard, Ex, ES or ES Ex) and corresponding stay plates.

[1] RM modules comes in the following versions: RM, RM Ex, RM FOC, RM ES, RM ES B, RM PE, RM PE B, RM BG, RM BG B, RM ES Ex, RM ES B Ex, RM PE Ex, RM ES B Ex, RM BG Ex, RM BG B Ex.

Additional insulation on penetrations and/or pipes:

- should be approved as having the same level of performance as the penetrated division and expected classification of penetration,
- is to be fitted as shown in the referred Manufacturer's drawings (see tables below) and also according to Manufacturer's insulation guidelines.

1.1 - A-0 Bulkhead

Frame type	Pipe material	Size	Pipe diameter (OD) [mm]	Frame position	Insulation drawing
S-series	Steel & Titanium	1x1 – 8x1	6 – 54	Any	N°S1609164 ID.3 rev. A dated 23/09/2024
S-series	Steel & Titanium	1x1 – 8+8x5	6 – 54	Any	N°S1609164 ID.4 rev. A dated 23/09/2024
S-series	Bundle (steel)	1x1 – 8x1	8 – 50	Any	N°S1609166 ID.3 rev. A dated 23/09/2024
S-series	Bundle (steel)	1x1 – 8+8x5	8 – 50	Any	N°S1609166 ID.4 rev. A dated 23/09/2024
S-series	Copper & CuNi	1x1 – 8x1	6 – 54	Any	N°S1609167 ID.1 rev. B dated 15/11/2024
SBTB-series	Steel & Titanium	1x1 – 8x1	6 – 30	Any	N°S1609165 ID.1 rev. A dated 23/09/2024

1.2 - A-0 Deck

Frame type	Pipe material	Size	Pipe diameter (OD) [mm]	Frame position	Insulation drawing
S-series	Steel & Titanium	1x1 – 8x1	6 – 30	Any	N°S1609164 ID.1 rev. A dated 23/09/2024
S-series	Steel & Titanium	1x1 – 8+8x5	6 – 50	Any	N°S1609164 ID.2 rev. A dated 23/09/2024
S-series	Bundle (steel)	1x1 – 8x1	8 – 50	Any	N°S1609166 ID.1 rev. A dated 23/09/2024
S-series	Bundle (steel)	1x1 – 8+8x5	8 – 50	Any	N°S1609166 ID.2 rev. A dated 23/09/2024
S-series	Copper & CuNi	1x1 – 8x1	6 – 54	Any	N°S1609167 ID.2 rev. B dated 15/11/2024
SK-series	Steel & Titanium	2x1 – 8x1	6 – 30	Unexposed*	N°S1609168 ID.2 rev. A dated 23/09/2024
SK-Series	Steel & Titanium	2x1 – 8x1	6 – 54	Any	N°S1609168 ID.1 rev. A dated 23/09/2024
SK-Series	Bundle (steel)	2x1 – 8x1	8 – 50	Any	N°S1609169 ID.1 rev. A dated 23/09/2024

* Limitation of installation - refer to §4.2

1.3 - A-60 Bulkhead

Frame type	Pipe material	Size	Pipe diameter (OD) [mm]	Frame position	Insulation drawing
S-Series	Steel & Titanium	1x1 – 8+8x5	6 – 30	Any	N°S1608660 ID.3 rev. B dated 28/10/2024
S-Series	Steel & Titanium	1x1 – 8+8x5	6 – 54	Any	N°S1608660 ID.4 rev. B dated 28/10/2024
S-Series	Bundle (steel)	1x1 – 8x1	8 – 50	Any	N°S1608898 ID.3 rev. A dated 23/09/2024
S-Series	Bundle (steel)	1x1 – 8+8x5	8 – 50	Any	N°S1608898 ID.4 rev. A dated 23/09/2024
S-Series	Copper & CuNi	1x1 – 8x1	6 – 54	Any	N°S1608899 ID.1 rev. B dated 29/10/2024

1.4 - A-60 Deck

Frame type	Pipe material	Size	Pipe diameter (OD) [mm]	Frame position	Insulation drawing
S-series	Steel & Titanium	1x1 – 8x1	6 – 30	Any	N°S1608660 ID.1 rev. B dated 28/10/2024
S-series	Steel & Titanium	1x1 – 8+8x5	6 – 50	Any	N°S1608660 ID.2 rev. B dated 28/10/2024
S-series	Bundle (steel)	1x1 – 8x1	8 – 50	Any	N°S1608898 ID.1 rev. A dated 23/09/2024
S-series	Bundle (steel)	1x1 – 8+8x5	8 – 50	Any	N°S1608898 ID.2 rev. A dated 23/09/2024
S-series	Copper & CuNi	1x1 – 8x1	6 – 54	Any	N°S1608899 ID.2 rev. B dated 29/10/2024
SK-series	Steel & Titanium	2x1 – 8x1	6 – 30	Unexposed*	N°S1608902 ID.2 rev. A dated 23/09/2024
SK-Series	Steel & Titanium	2x1 – 8x1	6 – 54	Any	N°S1608902 ID.1 rev. A dated 23/09/2024
SK-Series	Bundle (steel)	2x1 – 8x1	8 – 50	Any	N°S1608903 ID.1 rev. A dated 23/09/2024

* Limitation of installation - refer to §4.2

2. DOCUMENTS AND DRAWINGS:

As per the Manufacturer's insulation drawings quoted in tables in §1.

3. TEST REPORTS:

All tests as per IMO 2010 FTP Code, Annex 1, part 3.

3.1 - A-0 Bulkhead

Test report N°	Dated	Laboratory
RS-23/B-104/E	2023-04-25	CTO, Poland
PGB1022A	2023-11-23	DBI, Denmark

3.2 - A-0 Deck

N/A (Converted from A-60 test results without specific A-0 tests).

3.3 - A-60 Bulkhead

Test report N°	Dated	Laboratory
RS-18/B-485/E	2018-12-10	CTO, Poland
RS-22/B-336/E	2022-10-28	CTO, Poland
PGB10233A	2022-12-20	DBI, Denmark
RS-23/B-339/E	2023-11-03	CTO, Poland
PGB10221A	2023-11-24	DBI, Denmark
RS-24/B-046/E	2024-02-26	CTO, Poland
RS-24/B-270/E	2024-08-08	CTO, Poland
RS-24/B-333/E	2024-10-08	CTO, Poland

3.4 - A-60 Deck

Test report N°	Dated	Laboratory
6P02249	2016-08-17	SP, Sweden
RS-17/B-395/E	2017-10-30	CTO, Poland
RS-18/B-484/E	2018-12-10	CTO, Poland
PGB10174A	2022-07-13	DBI, Denmark
RS-22/B-337/E	2022-10-28	CTO, Poland
PGB10220A	2023-07-10	DBI, Denmark

4. APPLICATION / LIMITATION:4.1 - Approved for use as pipe penetrations:

- in A-15, A-30 , A-60 class steel divisions, with fire insulation as described in §1,
- in A-0 class steel divisions, with local fire insulation arrangement (on the penetration itself as described in §1 and 200 mm around) or without fire insulation.

4.2 - **For deck only, when specified in tables of §1 (*)**: approval is limited to pipe penetrations fitted on the upper side of the deck (unexposed installation).

4.3 - The penetration system is not to be used for penetration boundaries of tanks.

4.4 - The pipe penetration system has only been evaluated with regard to its fire resistance only. For installation in watertight bulkhead below the bulkhead deck, specific rules may require to subject the pipe penetrations to a prototype test of watertightness after having undergone the standard fire test for A-class divisions described in IMO 2010 FTP Code Annex 1 Part 3.

5. PRODUCTION SURVEY REQUIREMENTS:

5.1 - The **A-0/A-60 Class Pipe Penetration sealing system with multidiameter™ technology - S-series (steel)** are to be supplied by **ROXTEC International AB** in compliance with the type described in this certificate.

5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV product certificate.

5.3 - **ROXTEC International AB** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.

5.4 - For information, **ROXTEC International AB** has declared to Bureau Veritas the following production site(s):

ROXTEC International AB
Rombvägen 2
371 23 KARLSKRONA
SWEDEN

6. MARKING OF PRODUCT:

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

7. OTHERS:

7.1 - It is **ROXTEC International AB's** responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

7.2 - Watertightness and gas tightness in steel bulkheads and decks:

Frame type	Installation method	Pipe material	Water pressure [bar]	Gas pressure [bar]
S-series ^[1]	Welded	Steel, titanium, copper & CuNi	4 bar for 60 min	2,67 bar for 30 min
S-series ^[1]	Welded	Bundle (steel)	4 bar for 60 min	2 bar for 30 min
S-series ^[1]	Bolted ^[2]	Steel, titanium, copper, CuNi & Bundle (steel)	3,3 bar for 60 min	1,67 bar for 30 min
SFOHK	Bolted ^[3]	Steel, titanium, copper, CuNi & Bundle (steel)	2,67 bar for 60 min	N/A

^[1] Including S-, SK-, SBTB-Series

^[2] With gasket and self-tapping screws

^[3] With gasket and self-tapping screws or through going bolts

MLM020133	DNV report dated 2002-02-26
MLM020400	DNV report dated 2002-03-25
MLM020401	DNV report dated 2017-03-23
N141CR4U - A0374942	DNV report dated 2017-03-23
N142VXZX	DNV report dated 2024-03-04

7.3 - This Certificate supersedes the Type Approval Certificate N°63792/A0 BV issued on 27/01/2021 by the Society.

*** END OF CERTIFICATE ***