TYPE APPROVAL CERTIFICATE

Certificate No:
TAF00000D8
Revision No:
1

This is to certify:

That the Class H Penetration

with type designation(s)
ROXTEC SEALING SYSTEM WITH MULTIDIAMETER TECHNOLOGY: RS-SERIES (CABLE)

Issued to
Roxtec International AB
Karlskrona, **Sweden**

is found to comply with
DNV offshore standards

Application :

Approved as cable penetration in class H-120, H-60 and H-0 steel decks and bulkheads.

Issued at **Høvik** on **2022-02-02**

This Certificate is valid until **2027-02-01**.
DNV local station: **Sweden CMC**

Approval Engineer: **Kristin Grønnæss**

for **DNV**

Digitally Signed By: David-Andersen, Helene
Location: DNV Høvik, Norway

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.

Product description

"Roxtec sealing system with multidiameter technology: RS-series"
consisting of steel sleeve, welded or bolted (openable versions included) to steel decks and steel bulkheads. The sleeve is filled with Roxtec RS (standard or EMC) halogen free rubber sealing.

Application/Limitation

Approved as cable penetration in class H-120, H-60 and H-0_{400} in steel decks and bulkheads for approved ship cables as specified in the tables below.

General application: Fire against either side*

* In areas with requirements to maximum steel temperature in load bearing constructions, the bulkhead is approved for restricted application: Fire against insulated side

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

Type	Size	Max. cable diameter [mm]	Sleeve length [mm]	Sleeve thickness [mm]	Sleeve position	Sleeve insulation[1)]
RS	23 – 125	90	35 – 65	4 – 7	Symmetrical	S1573509; No. 1
RS	23 – 150	96	35 – 65	4 – 7	Any	S1573509; No. 2

1) Bolted sleeves are approved for restricted application only.

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

Type	Size	Max. cable diameter [mm]	Sleeve length [mm]	Sleeve thickness [mm]	Sleeve position	Sleeve insulation[1)]
RS	23 – 125	90	35 – 65	4 – 7	Symmetrical	S1573509; No. 1
RS	23 – 150	96	35 – 65	4 – 7	Any	S1573509; No. 2

1) Bolted sleeves are approved for restricted application only.

Table 3: Approved cable penetration in H-0_{400} steel bulkhead.

Type	Size	Max. cable diameter [mm]	Sleeve length [mm]	Sleeve thickness [mm]	Sleeve position	Sleeve insulation[1)]
RS	23 – 125	88	35 – 65	4 – 7	Unexposed	S1573516[2)]

1) Bolted sleeves are approved for restricted application only.
2) The protective coating is not defined as non-combustible and should not be used in accommodation or in enclosed areas.

Table 4: Approved cable penetration in H-120 steel deck.

Type	Size	Max. cable diameter [mm]	Sleeve length [mm]	Sleeve thickness [mm]	Sleeve position	Sleeve insulation
RS	23 – 125	88	35 – 65	4 – 7	Unexposed	S1573509; No. 3

Table 5: Approved cable penetration in H-60 steel deck.

Type	Size	Max. cable diameter [mm]	Sleeve length [mm]	Sleeve thickness [mm]	Sleeve position	Sleeve insulation
RS	23 – 125	88	35 – 65	4 – 7	Unexposed	S1573509; No. 3

Approved for penetration in deck and bulkheads limited to a pressure of 4.00 bar water tightness and 2.67 bar gas tightness.

For bolted versions with gasket and self-tapping screws, the pressure is limited to 3.33 bar water tightness and 1.67 bar gas tightness.

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. 22N007.12C dated 16 September 1999 from SINTEF, Trondheim, Norway.
Test report No. PG11087 dated 12 February 2003 from DIFT, Hvidovre, Denmark.
Test report No. PG11088 dated 18 February 2003 from DIFT, Hvidovre, Denmark.
Test report No. P703775 dated 7 December 2007 from SP, Borås, Sweden.
Test report No. RS-19/B-036/E dated 21 March 2019 from CTO, Gdansk, Poland.
Test report No. PBG10120A dated 17 December 2021 from DBI, Hvidovre, Denmark.

Water tightness/gas tightness:
Inspection report MLM 010235 dated 21 August 2001 from DNV, Malmö, Sweden.
Inspection report MLM 020133 dated 26 February 2002 from DNV, Malmö, Sweden.

Drawing No. S1573509 Rev. B dated 18 January 2022 from manufacturer.
Drawing No. S1573516 Rev. A dated 12 November 2021 from manufacturer.

Tests carried out

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

Pressure tests with water and Helium according to DNV Type Approval Programme 8.471.19-1.

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 DNV-CP-0338 Section 4.