

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Class H Penetration

with type designation(s)

Roxtec sealing system with multidiameter technology: RS-series (Sandwich panel)

issued to

Roxtec International AB
Karlskrona, Sweden

is found to comply with

DNV offshore standards

Application:

Approved for use as pipe penetration system in H-60 and H-120 class bulkheads.

Issued at **Høvik** on **2024-07-10**

This Certificate is valid until **2029-07-09**.

for **DNV**

DNV local unit: **Sweden CMC**

Approval Engineer: **Marcin Tobiasz**

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 AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") 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.



Product description

Roxtec sealing system with multidiameter technology: RS-series (Sandwich panel)

The RS pipe penetration seal consist of two halves with removable layers making it adaptable to pipes of different diameters. It is available in different versions, RS, RS OMD, RS EMC or RS EX, depending on application.

The RS-seal is installed into a steel sleeve with flange, the sleeve is attached with self-drilling screws with washers to the sandwich panel bulkhead together with counter frame. The steel sleeve is sealed with Roxtec Fire Sealant around the perimeter.

For further details, see approved drawing listed below.

Additional Place of Production:

Roxtec Sealing System (Shanghai) Co., Ltd Lingang Branch

Ground Floor A, No.875 QiuXin Road Zhongqilian (Lingang) Global Auto Parts Innovation Center, Shanghai, China.

Roxtec Saudi Arabia for Manufacturing LLC, 2634 - Ibn Sina Dist., Al Khobar 34627 – 6245, Al Khobar, Saudi Arabia

Application/Limitation

Approved for use as pipe penetration system in H-60 and H-120 class bulkheads. Other applications are subject to case-by-case approval.

Approved for installation in H-60 and H-120 bulkhead sandwich panel type G21 (manufactured by InterDam) or similar constructed H-class rated panels. The sandwich panel G21 was constructed with 170 mm thick insulation core (density 120 kg/m³) and 0.6 mm galvanized steel.

Table 1: Approved pipe penetration in H-120 bulkhead sandwich panels

Type	Size	Pipe type	Pipes diameter [mm]	Sleeve length [mm]	Sleeve thickness [mm]	Sleeve position ¹⁾	Penetration insulation
RS	25 – 150	Steel	6 – 114.3	35 – 65	4 – 7	Exposed ²⁾	Fully insulated on unexposed side and 1300 mm along pipe (S1590730, No.2)
RS	25	Steel	6	35	4	Either	Fully insulated on one side and 500 mm along pipe (S1590730, No.1)

1) The steel sleeve is inserted into panel.

2) Restricted application: sleeve inserted from fire hazard side.

Table 2: Approved pipe penetration in H-60 bulkhead sandwich panels

Type	Size	Pipe type	Pipes diameter [mm]	Sleeve length [mm]	Sleeve thickness [mm]	Sleeve position ¹⁾	Penetration insulation
RS	25 – 150	Steel	6 – 114.3	35 – 65	4 – 7	Either	Fully insulated on one side and 1300 mm along (S1590730, No.3)

1) The steel sleeve is inserted into panel.

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

Type Approval documentation

Certification in accordance with Class Programme DNV-CP-0338, September 2021.

Test report No. RS-22/B-244/E dated 11 August 2022 from CTO, Gdansk, Poland

Drawing No. S1590730 Rev A dated 11 April 2023 from maker.

Tests carried out

Tested according to IMO 2010 FTP Code Part 3 with the hydrocarbon time-temperature curve specified in EN 1363-2.

Marking of product

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

Periodical assessment

DNV 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.