

# TYPE APPROVAL CERTIFICATE

## This is to certify:

**That the Class H Penetration**

with type designation(s)

**Roxtec sealing system with multidiameter technology: GH-series (sandwich panel)**

Issued to

**Roxtec International AB**  
**Karlskrona, Sweden**

is found to comply with

**DNV GL offshore standards**

## Application :

**Approved for use as cable penetration system in class H-120 sandwich panel.**

Issued at **Høvik** on **2019-03-05**

for **DNV GL**

This Certificate is valid until **2024-03-04**.

DNV GL local station: **Gothenburg**

Approval Engineer: **Krzysztof Kolakowski**

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**Mårten Schei-Nilsson**  
**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.



Job Id: **262.1-030113-1**  
Certificate No: **TAF0000147**

## Product description

Roxtec sealing system with multidiameter technology: GH-series (sandwich panel), consisting of Roxtec GH-series steel frames in sizes 1x1 to 8+8x2 on one side and a counter frame on the opposite side. The GH-frame flange is attached with self-drilling screws with washers to the sandwich panel bulkhead together with counter frame. The counter frame is filled with "FireMaster Marine Plus Blanket" with density of 128 kg/m<sup>3</sup> manufactured by Thermal Ceramics. The GH-frame and counter frame were both sealed to the panel skins with Roxtec fire sealant.

The GH frame is filled with Roxtec (standard or Ex, EMC, PE, ES, BG, BGB) halogen free RM modules. Assembled with Roxtec Wedge kit or Roxtec EMC Wedge kit.

For further details, see approved drawing listed below.

## Application/Limitation

The penetrations are approved for use as a cable penetration system in H-120 bulkheads made of sandwich panel type G21, manufactured by InterDam BV, or equivalent H-class rated sandwich panels. Other applications are subject to case-by-case approval.

Watertightness and gastightness is not covered in this certificate.

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

## Type Approval documentation

Certification in accordance with Class Programme DNVGL-CP-0338, September 2018.

Test report no.2018-Efectis-R000386 dated 11 June 2018 from Efectis, Bleiswijk, The Netherlands.

Drawing no. S1537533 rev.A dated 1 November 2018 from maker.

Drawing no. S1529158 rev.A (2 pages) dated 3 January 2018 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 GL'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 DNVGL-CP-0338 Section 4.