

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Bulkhead/Deck Penetration

with type designation(s)

Roxtec sealing system with multidiameter technology:

G- series frames

Issued to

Roxtec International AB

KARLSKRONA, Sweden

is found to comply with

DNV GL rules for classification – Ships and offshore units

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

This Certificate is valid until **2020-12-31**.

Issued at **Høvik** on **2016-02-03**

DNV GL local station: **Malmö**

Approval Engineer: **Marta Alonso Pontes**

for **DNV GL**

Marit Laumann
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: **262.1-002582-10**
Certificate No: **TAE00000W1**

Product description

"Roxtec sealing system with multidiameter technology: G-series frames"

Consisting of Roxtec G-series steel frames (G, GO and GHM) in sizes 1-8 and combinations thereof, bolted or welded to a steel section. The G frame is filled with Roxtec (standard or EMC) halogen free RM modules. Assembled with Roxtec wedge kit (standard or EMC).

Application/Limitation

Cable and pipes (steel, copper, bundles) penetrations or combination thereof approved for water- and gas tightness in steel bulkheads or decks, limited to a pressure of 4 bar water tightness and 2,5 bar gas tightness.

(For bolted and/or openable installations with gasket, the pressure is limited to 2 bar water tightness and 1 bar gas tightness).

When used in High Speed and Light Crafts the penetrations are subject for approval in each case.

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

Each product is to be installed with its manual for installation and use.

Type Approval documentation

Tests carried out

Pressure tests with water and Helium according to Type Approval Programme 8-471.19-1 dated May 2001.

Marking of product

The product or packing is to be marked with name of manufacturer and type designation.

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the Type approval are complied with and that no alterations are made to the product design or choice of materials.

The main elements of the assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Production Sample Tests (PST) and Routines (RT) checked (if not available tests according to PST and RT to be carried out)
- Review of type approval documentation
- Review of possible change in design, materials and performance
- Ensuring traceability between manufacturer's product type marking and Type Approval Certificate.

Assessment to be performed at least every second year.

END OF CERTIFICATE