

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Bulkhead/Deck Penetration

with type designation(s)
MCT Brattberg 2000 type; RGP

Issued to

MCT Brattberg 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 **2020-06-29**.

Issued at **Høvik** on **2016-04-05**

DNV GL local station: **Malmö**

Approval Engineer: **Børre Dan Knutsen**

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: **262.1-002858-5**
Certificate No: **TAE000012K**

Product description

"MCT Brattberg 2000 type: RGP"

RGP 50, RGP 70, RGP 100, RGP 150 and RGP 200 frames filled with 60 mm thick MCT Brattberg Lycron insert blocks.

The frames are welded to the steel section.

Application/Limitation

Approved for penetration in bulkheads or decks limited to a pressure of 3.2 bar.

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

When requested to be used in watertight bulkheads on passenger ships and Special Purpose Ships (SPS), the penetration system has to comply with the requirements given in SOLAS Ch. II-1 Reg. 13.2.3 (2009 issue). Penetrations passing through watertight bulkheads are subject for separate examination and approval by actual flag administration."

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

Type Approval documentation

Tests carried out

Pressure tests with water according to Type Approval Programme 8-471.19.1 dated May 2001.

Marking of product

The product 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 Routines (RT) checked (if not available tests according to 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