

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Class H Fire Wall and Bulkhead

with type designation(s)
H-60 Steel Bulkhead PNR-144

Issued to

Rockfibras do Brasil Industria e Comercio Ltda
Guararema SP, Brazil

is found to comply with
DNV GL offshore standards

Application :

Approved for use as a vertical fire retarding division of class H-60.

Restricted application: Fire against insulated side.

This Certificate is valid until **2021-06-30**.

Issued at **Høvik** on **2016-11-16**

DNV GL local station: **Rio de Janeiro, SiO**

Approval Engineer: **Synnøve Bolstad Eri**

for **DNV GL**

Petter Langnes
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:
Certificate No: **TAF00000EA**

Product description

"H-60 Steel Bulkhead PNR-144"

Consists of a steel bulkhead covered with 2 layers of 50 mm thick Stone Wool blankets type PNR-144 (nominal density 144 kg/m³) between and upon the stiffeners.

The insulation blankets of the second layer are laid to cover the joints of the first layer.

Minimum insulation thickness (to bulkhead and stiffeners) at any point is 100 mm.

Anchoring of insulation to bulkhead and stiffeners is done with Ø3 x 110 mm welded pins with max. spacing: 275 mm horizontal, 400 mm vertical and approx. 240 mm diagonal.

Galvanized wire mesh is used to hold the insulation in place, locked to the welding pins with washers.

Application/Limitation

Arrangement and fastening of the wall is subject to approval in each case.

Restricted application: Fire against insulated side.

Any surface materials used have to be approved for smoke and toxicity and low flame spread characteristics (IMO 2010 FTP Code part 2 and 5) when required according to relevant rules.

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

Type Approval documentation

Certification in accordance with Class Programme DNVGL-CP-0338, October 2015.

Test report No. 98354-205 dated 23 January 2008 from Instituto De Pesquisas Tecnológicas (IPT), São Paulo, Brazil.

Drawing No. 1/2186-IO-5615 dated 25 July 2007 from Rockfibras Do Brasil Ind. Com. Ltda.

Tests carried out

Tested according to IMO FTPC Part 3 (IMO Res. A.754(18)) with furnace temperature following the hydrocarbon curve specified in ISO 834-3 (NPD HC fire temperature curve).

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.