

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Non-Combustible Material**

with type designation(s)

PAROC Marine Slab 22-250, PAROC Marine Slab LO 150, PAROC Marine Slab VLO 150, PAROC High Temperature Slab, Paroc Marine Floor Slab 140

Issued to

**PAROC GROUP OY
Helsinki, Finland**

is found to comply with

Det Norske Veritas' Offshore Standards**Det Norske Veritas' Rules for Classification of Ships****Det Norske Veritas' Interpretation of SOLAS 1974 Convention as Amended****Application :****The product may be used as an integrated part of approved fire resisting divisions only when tested as such.**

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This certificate is recognized by Transport Canada.This Certificate is valid until **2018-12-31**.Issued at **Høvik** on **2014-09-16**DNV GL local station: **Turku**for **DNV GL**Approval Engineer: **Silje Helene Waagaard**

**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. If any person suffers loss or damage which is proven to have been caused by any negligent act or omission of the Society, then the Society shall pay compensation to such person for his proven direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question. The maximum compensation shall never exceed USD 2 million. In this provision the "Society" shall mean DNV GL AS as well as all its direct and indirect owners, affiliates, subsidiaries, directors, officers, employees, agents and any other person or entity acting on behalf of DNV GL AS.

Certificate No: **F-20862**
File No: **471.17**
Job Id: **262.1-017560-1**

Product description

"PAROC Marine Slab 22-250" 12 unfaced stone wool slab products, each with nominal density of approximately 22, 30, 40, 60, 80, 130, 150, 160, 180, 200, 220 and 250 kg/m³. Nominal organic content is accordingly 2.1, 1.7, 1.9, 1.7, 2.5, 1.9, 3.9, 2.0, 1.9, 1.9, 2.5 and 2.5 ± 0.3 %.

"PAROC Marine Slab LO 150" unfaced stone wool slab with nominal density of approximately 150 kg/m³. Nominal organic content is 1.2 ± 0.3 %.

"PAROC Marine Slab VLO 150" stone wool slab with nominal density of approximately 150 kg/m³. Nominal organic content is 0.7 ± 0.3 %.

"PAROC High Temperature Slab" high temperature stone wool block with nominal density of approximately 230 kg/m³. Nominal organic content is 3.5 ± 0.3 %.

"PAROC Marine Floor Slab 140" unfaced stone wool slab with nominal density of approximately 140 kg/m³. Nominal organic content is 1.6 ± 0.3 %.

Application/Limitation

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

Type Approval documentation

Certification in accordance with Standard for Certification No. 1.2, Type Approval, January 2013.

Product	Test report No.	Date of test report
PAROC Marine Slab 22	VTT-S-8346-13	02 December 2013
PAROC Marine Slab 30	VTT-S-5836-13	26 August 2013
PAROC Marine Slab 40	VTT-S-5834-13	26 August 2013
PAROC Marine Slab 60	VTT-S-8354-13	03 December 2013
PAROC Marine Slab 80	VTT-S-5837-13	26 August 2013
PAROC Marine Slab 130	VTT-S-8347-13	02 December 2013
PAROC Marine Slab 150	VTT-S-5853-13	26 August 2013
PAROC Marine Slab 160	VTT-S-8349-13	03 December 2013
PAROC Marine Slab 180	VTT-S-7669-13	02 December 2013
PAROC Marine Slab 200	VTT-S-8353-13	03 December 2013
PAROC Marine Slab 220	VTT-S-7731-13	02 December 2013
PAROC Marine Slab 250	VTT-S-7732-13	02 December 2013
PAROC Marine Slab LO 150	VTT-S-8348-13	03 December 2013
PAROC Marine Slab VLO 150	VTT-S-5851-13	26 August 2013
PAROC High Temperature Slab	VTT-S-5850-13	26 August 2013
PAROC Marine Floor Slab 140	VTT-S-8344-13	02 December 2013

All test reports mentioned above are from VTT Expert Services Ltd, Espoo, Finland.

Tests carried out

Tested according to IMO 2010 FTP Code part 1.

Marking of product

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

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Transport Canada Approval

Based on the procedures laid down in the Transport Canada Publication entitled "*Approval Procedures for, Life Saving Equipment and Structural Fire Protection Products (TP 14612)*", Det Norske Veritas confirms that the product/s listed in this certificate is/are in accordance with Transport Canada's requirements.

Periodical assessment

DNV'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 Standard for certification No. 1.2 Type Approval Item 4.