

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED), issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Authority. This Certificate is issued by DNV GL AS under the authority of the Government of the Kingdom of Norway.

This is to certify:

That the Non-combustible materials

with type designation(s)

Rocterm/ Ecoterme insulation type: "Slab PI40 through Pi180", "Slab PI40AL through Pi180AL", "Mat R70 through R125", "Mat MN70 through MN125", "Mat MA70 through MA125", "Pipe sections CQ70 through CQ120", "Pipe sections CQ70AL through CQ120AL".

Issued to

**TERMOLAN - Isolamentos Termo- Acústicos S.A.
VILA DAS AVES, Portugal**

is found to comply with the requirements in the following Regulations/Standards:

Regulation **(EU) 2015/559,**

Annex A.1, item No. A.1/3.13 and Annex B, Module B in the Directive; SOLAS 74 as amended, Regulation II-2/3 II-2/5, II-2/9 & X/3, 2000 HSC Code 7 and IMO 2010 FTP Code

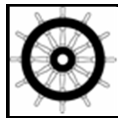
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2020-07-08.**

Issued at **Høvik** on **2017-01-03**

DNV GL local station:
Lisbon

Approval Engineer:
Mårten Schei-Nilsson



Notified Body
No.: **0575**



for **DNV GL AS**

Digitally Signed By: Hoff, Øyvind
Location: DNV GL Høvik, Norway
Signing Date: 06.01.2017, on behalf of

Vidar Dolonen
Head of Notified Body

A U.S. Coast Guard approval number will be assigned to the equipment when the production module has been completed and will appear on the production module certificate (module D, E or F), as allowed by the "Agreement between the United States of America and the EEA EFTA states on the mutual recognition of Certificates of Conformity for Marine Equipment" signed 17 October 2005.

The mark of conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU.

This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV GL AS of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled.

Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.



Product description

"Rocterm/Ecoterme" insulation type:

- "Slab PI40 through Pi180", composed of stone wool of densities 40 kg/m³ - 180 kg/m³ and organic content of 0.9-3.7 %.
- "Slab PI40AL through Pi180AL", composed of stone wool of densities 40 kg/m³ - 180 kg/m³ faced with hot melted PE laminated glass fibre reinforced aluminium foil.
- "Mat R70 through R125", composed of stone wool mat with densities 70 kg/m³ - 125 kg/m³. One side of the product is covered by a net.
- "Mat MN70 through MN125", composed of stone wool mat with densities 70 kg/m³ - 125 kg/m³. Without facing.
- "Mat MA70 through MA125", composed of stone wool mat with densities 70 kg/m³ - 125 kg/m³. Faced with hot melted PE laminated glass fibre reinforced aluminium foil.
- "Pipe sections CQ70 through CQ120", composed of stone wool in the shape of pipe insulation with densities 70 kg/m³ - 120 kg/m³. Without facing.
- "Pipe sections CQ70AL through CQ120AL", composed of stone wool in the shape of pipe insulation with densities 70 kg/m³ - 120 kg/m³. Faced with hot melted PE laminated glass fibre reinforced aluminium foil.

Application/Limitation

Approved for use as non-combustible material.

The product may be used as an integrated part of approved fire resisting divisions only when tested as such.

The Insulation faced with hot melted PE laminated glass fibre reinforced aluminium foil have to be approved (surface flammability, smoke and toxicity) according to the Marine Equipment Directive and bear the Mark of Conformity.

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

Type Examination documentation

Test report No. P102401 dated 21st of May 2001 (non-combustibility).

Test report No. F314909 dated 23rd of September 2003 (surface flammability).

Test report No. 5P03572 dated 28th of April 2015 (smoke and toxicity).

All above test reports are from SP Technical Research Institute of Sweden, Borås, Sweden.

Test report No. PFA10540 dated 14th of February 2014 (non-combustibility).

From Danish Institute of Fire and Security Technology, Hvidovre, Denmark.

Test report No. 03/2009-LNEC/LERF dated 23rd of February 2009 (non-combustibility), from Laboratório Nacional de Engenharia Civil, I.P., Lisboa, Portugal.

Tests carried out

Tested according to IMO FTPC Part 1 and Part 5 and Annex 2 item 2.2; and in compliance with IMO 2010 FTP Code Ch. 8.

Tested according to IMO 2010 FTP Code Part 2.

Marking of product

The product or packing is to be marked with name and address of manufacturer, type designation, the MED Mark of Conformity and USCG approval number if applicable (see first page).