DNV·GL

Certificate No:
MEDB0000507

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 Norway.

This is to certify:

That the Surface materials and floor coverings with low flame-spread characteristics: pipe insulation covers

with type designation(s)
Mineral wool protection board

Issued to
Korea EST Co., Ltd.
Ulsan, Republic of Korea

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2018/773,**
item No. MED/3.18d. SOLAS 74, Reg. II-2/3, II-2/5 & X/3, IMO MSC/Circ. 1120, 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 **2024-03-14**.

Issued at **Høvik** on **2019-03-15**

DNV GL local station:
Ulsan

Approval Engineer:
Nanna Martine Jacobsen

Notified Body
No.: **0575**

for **DNV GL AS**

Roald Vårheim
Head of Notified Body

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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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.

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Job Id: **344.1-009008-1**
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Product description

"Mineral wool protection board"
composed of mineral wool with density 120 kg/m^3 (manufactured by KCC Corporation) bounded to a board with 0.5 kg/m^3 and thickness 0.5 mm made of glass fiber and resin (both bond and board is manufactured by Korea EST Co. Ltd.).

Nominal thickness: 50 mm
Maximum organic content: 50%
Colour: White

Application/Limitation

Approved for use as low flame spread material, not generating excessive quantities of smoke nor toxic products in fire.

The product may be used on cold service pipework / fittings for refrigeration system everywhere onboard, and for pipework, fittings, air ducts and tanks insulation in cargo areas, mail rooms, baggage rooms and refrigerated compartments of service spaces, and exterior locations (SOLAS II-2/5 3.1.1)". (Piping for hot and cold sanitary water cannot be considered "cold service pipe work/fittings")

Any adhesive used, other than the one used during testing, has to be tested for low flame spread characteristics according to IMO 2010 FTP Code part 5 and to be approved according to the Marine Equipment Directive and bear the Mark of Conformity.

The insulation materials used have to be approved according to the Marine Equipment Directive and bear the Mark of Conformity.

The product satisfies the requirement for maximum calorific value (ref. SOLAS Chapter II-2, Reg 5.3.2.2) without further testing.

Extent of application is to be considered and accepted for each case/project.

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

Type Approval documentation

Test Report No. KOMERI-0402-16T3115 dated 14 November 2016 from KOMERI, Busan, Korea.

Tests carried out

Tested according to IMO 2010 FTP Code Part 5 and Annex 2 item 2.2 and 2.3.

Marking of product

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