

CERTIFICATE NUMBER EFFECTIVE DATE EXPIRY DATE ABS TECHNICAL OFFICE 23-2347039-PDA 10-Jan-2023 09-Jan-2028 Busan Ship Engineering

CERTIFICATE OF

Product Design Assessment

This is to certify that a representative of this Bureau did, at the request of

SAINT-GOBAIN ISOVER KOREA CO., LTD

70 BUGOKGONGDAN 1-GIL, SONG-AK-EUP, , DANGJIN-SI, Korea, Republic of

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

Product: Non Combustible Material

Model: Glass Wool 24K,

> Glass Wool 32K, Glass Wool 40K, Glass Wool 48K. Glass Wool 64K,

Glass Wool Pipe Cover 55K, Glass Wool Pipe Cover 65K,

Endorsements:

Tier: 3 - Type Approved, unit certification not required

This Product Design Assessment (PDA) Certificate remains valid until 09/Jan/2028 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

> American Bureau Of Shipping

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010)

SAINT-GOBAIN ISOVER KOREA CO., LTD

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DANGJIN-SI CHUNGCHEONGNAM-DO

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Web: www.isover.co.kr

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Product: Non Combustible Material

Model: Glass Wool 24K,

Glass Wool 32K, Glass Wool 40K, Glass Wool 48K, Glass Wool 64K,

Glass Wool Pipe Cover 55K, Glass Wool Pipe Cover 65K,

Endorsements:

Intended Service:

Ships and Offshore Installations.

Description:

Glass Wool 24K: Nominal Density 24 Kg/m3. Glass Wool 32K: Nominal Density 32 Kg/m3. Glass Wool 40K: Nominal Density 40 Kg/m3. Glass Wool 48K: Nominal Density 48 Kg/m3. Glass Wool 64K: Nominal Density 64 Kg/m3. Glass Wool 64K: Nominal Density 64 Kg/m3.

Glass Wool Pipe Cover 55K: Nominal Density 55 Kg/m3. Glass Wool Pipe Cover 65K: Nominal Density 65 Kg/m3.

Rating:

Non-Combustibility.

Service Restriction:

- -. Unit Certification is not required for this product.
- -. If the manufacturer or purchaser requests an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.
- -. The scope of Type Approval is to comply with MSC.1/Circ.1221 dated 11 December 2006.

Comments:

- -. The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
- -. Our approval is based on that the above materials have been tested and certified by Fire Insurers Laboratories of Korea (FILK), Report Nos.: A2015-1259 dated 13 October 2015 & A2015-1260 dated 15 October 2015 & A2015-1261 dated 19 October 2015 & A2015-1262 dated 20 October 2015 & A2015-1263 dated 21 October 2015 & A2016-0785E dated 21 June 2016 & A2016-0786E dated 22 June 2016.
- -. Unless specially directed by Administration, this approval is not to be construed as a substitute for Flag Administration's approval for the purpose of SOLAS (Consolidated Edition 2020), as amended.
- -. This certificate may not be used for EU and US flagged vessels (MED and/or USCG have their own specific/requirements).

Notes/Drawing/Documentation:

Drawing No. A2015-1259 dated 13 October 2015, FILK Test Report for Glass Wool 24K, Revision: - Drawing No. A2015-1260 dated 15 October 2015, FILK Test Report for Glass Wool 32K, Revision: - Drawing No. A2015-1261 dated 19 October 2015, FILK Test Report for Glass Wool 40K, Revision: - Drawing No. A2015-1262 dated 20 October 2015, FILK Test Report for Glass Wool 48K, Revision: - Drawing No. A2015-1263 dated 21 October 2015, FILK Test Report for Glass Wool 64K, Revision: -

Drawing No. A2016-0785E dated 21 June 2016, FILK Test Report for Glass Wool Pipe Cover 55K, Revision: - Drawing No. A2016-0786E dated 22 June 2016, FILK Test Report for Glass Wool Pipe Cover 65K, Revision: -

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Drawing No. Glass Wool 24K, Technical Data Sheet for Glass Wool 24K, Revision: Drawing No. Glass Wool 32K, Technical Data Sheet for Glass Wool 32K, Revision: Drawing No. Glass Wool 40K, Technical Data Sheet for Glass Wool 40K, Revision: Drawing No. Glass Wool 48K, Technical Data Sheet for Glass Wool 48K, Revision: Drawing No. Glass Wool 64K, Technical Data Sheet for Glass Wool 64K, Revision: Drawing No. Glass Wool Pipe Cover 55K, Technical Data Sheet for Glass Wool Pipe Cover 55K, Revision: Drawing No. Glass Wool Pipe Cover 65K, Technical Data Sheet for Glass Wool Pipe Cover 65K, Revision: -

Terms of Validity:

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STANDARDS

ABS Rules:

2023 Marine Vessel Rules 1-1-4/7.7, 1-1-A3, 1-1-A4

2023 Mobile Offshore Drilling Unit Rules 1-1-4/9.7, 1-1-A2, 1-1-A3

National:

NA

International:

IMO Resolution MSC.307(88) adopted on 2010, IMO FTP Code 2010 (2012 Edition), Annex 1 Part 1, in conjunction with SOLAS (Consolidated Edition 2020), as amended.

Government:

NA

EUMED:

NA

OTHERS:

NA