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| CERTIFICATE NUMBER | 22-2313846-PDA |
| EFFECTIVE DATE | 20-Dec-2022 |
| EXPIRY DATE | 19-Dec-2027 |
| ABS TECHNICAL OFFICE | London Engineering Department |

CERTIFICATE OF Product Design Assessment

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

ROCKWOOL INTERNATIONAL A/S

located at

HOVEDGADEN 584, , DK-2640 HEDEHUSENE, Denmark

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: Bulkhead, A-60 Class
Model: A60 Bulkhead, Steel SeaRox SL 620 60mm / 25mm
Endorsements:
Tier: 3 - Type Approved, unit certification not required

This Product Design Assessment (PDA) Certificate remains valid until 19/Dec/2027 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

Nitin Tyagi,Engineer/Consultant

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)

ROCKWOOL INTERNATIONAL A/S

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Denmark

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Web: www.rockwool-rti.com

Tier: 3 - Type Approved, unit certification not required

Product: Bulkhead, A-60 Class

Model: A60 Bulkhead, Steel SeaRox SL 620 60mm / 25mm

Endorsements:

Intended Service:

To form part of A-Class fire division (Bulkhead) on ABS Classed Vessels, Units or Facilities

Description:

A60 Bulkhead, Steel with SeaRox SL 620: Composed of steel bulkhead insulated with SeaRox SL 620 (density 100kg/m³) between the stiffeners and SeaRox SL 620 (density 100kg/m³) around the stiffeners. Minimal thickness of the insulation on the bulkhead is 60mm. Minimal thickness of the insulation around the stiffeners is 25mm. Insulation density range on the bulkhead between the stiffeners is 100-130kg/m³ and on the stiffeners 100-130kg/m³. The insulation is fixed to the bulkhead by means of standard 3mm pins in combination with 30-38mm diameter steel clips (spring washers). Distance between pins on stiffeners is maximum 300mm. Distance between pins on the bulkhead (between stiffeners) is maximum 300mm.

For further details about pin-setting and design see drawing 430-1/2/3/4.

Rating:

A-60 Steel Bulkhead

Service Restriction:

- 1) Unit Certification is not required for this product.
- 2) Continuous compliance with the statutory requirements requires maintenance of the Full Type Approval. The scope of Type Approval is to comply with MSC.1/Cir. 1221 dated 1 December 2006.
- 3) If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

Comments:

- 1) The Manufacturer has provided a declaration about the control of, or lack of Asbestos in this product.
- 2) Unless specifically directed by the Administration, this approval is not to be construed as a substitute of a flag Administration's approval for the purpose of SOLAS (2020 Consolidated Edition), as amended.
- 3) In those instances where flag administration may have their own specific requirements, flag Administration's approval may be required.

Notes/Drawing/Documentation:

DBI Fire test report ref. PGA10946A, Dated 16 Dec 2016

Insulation installation as per drawing no. 520 dated 16 Dec 2016

Pin-setting and design as per drawing 430-1/2/3/4

DBI Assessment Report ref. PHA10905A, Dated 23 Feb 2017

DBI Assessment Report ref. PHA10905B, Dated 23 Feb 2017

DBI Assessment Report ref. PHA10905C, Dated 23 Feb 2017

DBI Assessment Report ref. PHA10905D, Dated 23 Feb 2017

DBI Assessment Report ref. PHA10905E, Dated 23 Feb 2017

Terms of Validity:

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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.

STANDARDS

ABS Rules:

ABS Rules for Conditions of Classification 2022: 1-1-4/7.7, 1-1-A3 & A4

ABS Rules for Conditions of Classification - Offshore Units and Structures 2022: 1-1-4/9.7, 1-1-A2 & 1-1-A3

National:

NA

International:

IMO Resolution MSC.307(88) adopted on 3 Dec 2010 - 2010 FTP Code (2012 Edition): International Code for Application of Fire Test Procedures

Government:

NA

EUMED:

NA

OTHERS:

NA



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|----------------------|-------------------------------|
| CERTIFICATE NUMBER | 22-2313846-PDA-DUP |
| EFFECTIVE DATE | 20-Dec-2022 |
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| ABS TECHNICAL OFFICE | London Engineering Department |

CERTIFICATE OF Product Design Assessment

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

ROXUL ROCKWOOL INSULATION INDIA PVT. LTD.

located at

**PLOT Z/4 DAHEJ SEZ, , DAHEJ, DISTRICT BHARUCH, GUJARAT,
India, 392130**

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: Bulkhead, A-60 Class
Model: A60 Bulkhead, Steel SeaRox SL 620 60mm / 25mm
Endorsements:
Tier: 3 - Type Approved, unit certification not required

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Fax:

Email: lukas.Vonsik@rockwool.com

Web: www.rockwool-searox.com

Tier: 3 - Type Approved, unit certification not required

Product: Bulkhead, A-60 Class

Model: A60 Bulkhead, Steel SeaRox SL 620 60mm / 25mm

Endorsements:

Intended Service:

To form part of A-Class fire division (Bulkhead) on ABS Classed Vessels, Units or Facilities

Description:

A60 Bulkhead, Steel with SeaRox SL 620: Composed of steel bulkhead insulated with SeaRox SL 620 (density 100kg/m³) between the stiffeners and SeaRox SL 620 (density 100kg/m³) around the stiffeners. Minimal thickness of the insulation on the bulkhead is 60mm. Minimal thickness of the insulation around the stiffeners is 25mm. Insulation density range on the bulkhead between the stiffeners is 100-130kg/m³ and on the stiffeners 100-130kg/m³. The insulation is fixed to the bulkhead by means of standard 3mm pins in combination with 30-38mm diameter steel clips (spring washers). Distance between pins on stiffeners is maximum 300mm. Distance between pins on the bulkhead (between stiffeners) is maximum 300mm.

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