



Certificate Number 24-6743358
Issue Date 05-DEC-2024
Expiration Date 26-FEB-2030
ABS Port Office Paducah Station
Website www.strongwell.com

CERTIFICATE OF Manufacturing Assessment

This is to certify that the Undersigned evaluated the manufacturing quality procedures of

Strongwell

located at

400 Commonwealth Ave, Bristol, VA 24201

The quality monitoring systems during production were verified to reflect the specific surveys, required by the ABS Rules, Guides, the associated Specifications and Standards for the manufacture of

Fiber Reinforced Polymer (FRP) Grating

This manufacturer presented a sample or specimen of the product, representative of the "type" approved for the purpose of verifying that the "type" has been manufactured in conformance with the Manufacturer's Product Design Assessment(s).

This Certificate is manufacturer and location specific and is subject to annual audits. Consult the ABS Type Approval website to confirm the continued validity of this certificate and the status of products.

The ABS Office issuing the certificate is to be kept updated with changes to the production methods, quality control systems, products and models and any changes made.



Michael Andersen, Surveyor

Annual Endorsement

First

Second

Third

Fourth

Surveyor

WO and Date

NOTE: This Certificate evidences compliance with one or more of the Rules, guides, standards or other criteria of American Bureau of Shipping and is issued solely for the use of the Bureau, its committees, its clients or other authorized entities. This Certificate is a representation only that the structure, item of material, equipment, machinery or any other item covered by this Certificate has met one or more of the Rules, guides, standards or other criteria of American Bureau of Shipping as of the date of issue. Parties are advised to review the Rules for the scope and conditions of classification and to review the survey records for a fuller description of any restrictions or limitation on the vessel's service or surveys. The validity, applicability and interpretation of this Certificate is governed by the Rules and standards of American Bureau of Shipping who shall remain the sole judge thereof. Nothing contained in this Certificate or in any notation made in contemplation of this Certificate shall be deemed to relieve any designer, builder, owner, manufacturer, seller, supplier, repairer, operator or other entity of any warranty express or implied.



**Work Order - WO0272339
Product Design Assessment (PDA) -
Revalidation
FRP Grating
PDA No. 25-0272339-PDA**

Attention: STRONGWELL (WCN: 624793)

The documents shown in the attached list are reviewed or filed for reference in accordance with the applicable requirements indicated in the PDA along with the service restrictions and comments.

We recommend that you monitor the ABS Rules, Guides and other standards used in the Assessment. These Rules, Guides and standards often change on an annual basis, and you must comply with the new Rules, Guides and standards in order for the product to be used on an ABS classed vessel or facility contracted under the new Rules, Guides or specifications.

Additionally, we acknowledge the PDA request form warranting that the materials used in the product(s) are free from asbestos.

Refer to attachments, Product Design Assessment Certificate (25-0272339-PDA).

For any clarifications, contact James Oehrle at JOehrle@eagle.org.

Very truly yours,

Gareth Burton
Senior Vice President of Engineering

Electronically Signed by: Nikolaos Vrellos

Documents List

Drawing No.	Rev. No.	Title	Status
Client Letter 1	-	Declaration Conformity	Reviewed
168985	-	SGS Test Report	Reviewed
ST1124	-	DURAGRATE MOLDED FIBERGLASS GRATING	Approved
Client Letter 2	-	Declaration EHS	Reviewed
06 74 13	11.2023	FRP Specifications	Reviewed
CERT-08923-2005-AQ-USA-ANAB	-	ISO 9001:2015	Filed by ABS for Reference Only

Electronic copies of the documents, appropriately stamped, are available in the ABS MyFreedom™ Client Portal.

Include: PDA Certificate 25-0272339-PDA

All Documents approved by 25-0272339-PDA are listed in the attachment to the PDA certificate.



CERTIFICATE NUMBER
EFFECTIVE DATE
EXPIRY DATE
ABS TECHNICAL OFFICE

25-0272339-PDA
13-May-2025
12-May-2030
Houston Materials

CERTIFICATE OF Product Design Assessment

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

STRONGWELL

located at

**400 COMMONWEALTH AVE., P.O. BOX 580, , BRISTOL, VA, United
States, 24203**

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: FRP Grating
Model: DURAGRATE®, 1", 1.5" & 2" Molded Fiberglass Grating
Endorsements:
Tier: 3 - Type Approved, unit certification not required

This Product Design Assessment (PDA) Certificate remains valid until 12/May/2030 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

Satya P.K. (Satya Meruva) Meruva, Manager

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)

STRONGWELL

400 COMMONWEALTH AVE.

P.O. BOX 580

BRISTOL VA

United States 24203

Telephone: 276-645-8000

Fax: 276-645-8132

Email: bmyers@strongwell.com

Web: www.strongwell.com.

Tier: 3 - Type Approved, unit certification not required

Product: FRP Grating

Model: DURAGRATE®, 1", 1.5" & 2" Molded Fiberglass Grating

Endorsements:

Intended Service:

Marine and Offshore Installations - Personnel Walkways, Catwalks, Ladders, Platforms or Access Areas in Cargo Holds, Cargo Tanks, Fuel Oil Tanks, Ballast Water Tanks, Cofferdams, Void Spaces, Double Bottoms, Pipe Tunnels, Open Decks and Semi-Enclosed Areas.

Description:

DURAGRATE® is comprised of fiberglass rovings combined with a choice of thermosetting resin systems. DURAGRATE grating panels are molded in one piece, with a plain concave non-slip walking surface. DURAGRATE® grating is supplied in 12 standard panel sizes: 3-, 4- and 5-foot widths, in each of 8-, 10- and 12-foot lengths. Custom sizes are available upon request. DURAGRATE® resin codes (resin bases) are VE (Vinyl Ester), ISO (Isophthalic polyester), and FF (Isophthalic polyester).

Rating:

Thickness 1", 1 1/2" or 2".

Flame Spread Rating of 20 or less: DURAGRATE®

Service Restriction:

- 1) Unit Certification is not required for this product. 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.
- 2) DURAGRATE GP may only be used in Applications requiring No Structural Fire Integrity as set forth in the USCG PFM 2-98 and Appendix 3. These Areas are limited to Personnel Walkways, Catwalks, Ladders, Platforms or Access Areas in Cargo Holds, Cargo Tanks, Fuel Oil Tanks, Ballast Water Tanks, Cofferdams, Void Spaces, Double Bottoms, Pipe Tunnels, Open Decks and Semi-Enclosed Areas as set forth in the USCG PFM Structural Fire Integrity Matrix and Appendix 3.
- 3) All other DURAGRATE grating resins may be used only where there are No Flame Spread and/or Smoke developed requirements according to the USCG PFM 2-98 and Appendix 3. Consult the USCG PFM Structural Fire Integrity Matrix and Appendix 3 for additional information as to Location and Intended Service.
- 4) The product is not to be used in areas where L1, L2 or L3 rated FRP grating are required per ABS Rules for Building and Classing Facilities on Offshore Installations.

Comments:

- 1) The manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
- 2) This approval was not done on behalf of a particular Administration.
- 3) USCG Marine Safety Manual, Vol. II, Para. 5.C.6 (from USCG PFM 2-98, Policy File Memorandum on the use of fiber reinforced plastic gratings & cable trays)

Notes/Drawing/Documentation:

Drawing No. 168985, SGS Test Report, Revision: -, Pages: 4

Drawing No. Client Letter 2, Declaration EHS, Revision: -, Pages: 1

Drawing No. 06 74 13, FRP Specifications, Revision: 11.2023, Pages: 9

Drawing No. Client Letter 1, Declaration Conformity, Revision: -, Pages: 1

Drawing No. CERT-08923-2005-AQ-USA-ANAB, ISO 9001:2015, Revision: -, Pages: 2

Drawing No. ST1124, DURAGRATE MOLDED FIBERGLASS GRATING, Revision: -, Pages: 12

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United States 24203

Telephone: 276-645-8000

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Email: bmyers@strongwell.com

Web: www.strongwell.com.

Tier: 3 - Type Approved, unit certification not required

Terms of Validity:

This Product Design Assessment (PDA) Certificate remains valid until 12/May/2030 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).

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STANDARDS

ABS Rules:

Rules for Building and Classing Marine Vessels (2025): 1-1-4/7.7, 1-1-Appendix 3, 1-1-Appendix 4.

Rules for Building and Classing Offshore Units (2025): 1-1-4/9.7, 1-1-A2, 1-1-A3, which covers the following:

Rules for Building and Classing Facilities on Offshore Installations (2025): Appendix 3/1, 3, 5.3, 5.5.1, 5.7.1, 9.

National:

ASTM E84-21a

International:

NA

Government:

NA

EUMED:

NA

OTHERS:

NA