



STRONGWELL



世界最大のFRP製品メーカー USCG Fire Integrity Level 2 取得 グレーチング新規標準 ASTM F3059 承認

**U. S. Department of Homeland Security
United States Coast Guard
Certificate of Approval**

Coast Guard Approval Number: 164.040/16/0 Expires: 01 May 2020

FIBER REINFORCED PLASTIC GRATING

STRONGWELL
CHATFIELD DIVISION
1610 HIGHWAY 82 SOUTH
CHATFIELD, MN 55923-9759

Duragrid ASTM F3059 38mm and 48mm phenolic fiber reinforced plastic (FRP) gratings approved as meeting structural fire integrity Level 2 (L2) and surface flammability requirements of ASTM F3059-16.

Each pultruded grating model has a maximum unsupported span of 1118 mm (44 in) and a maximum bearing bar spacing of 38.1 mm (1.5 in) on center. Duragrid 38mm has a bearing bar thickness of 38.1mm (1.5 in), and Duragrid 48 mm has a bearing bar thickness of 48mm (1.77 in).

U.S. Coast Guard NVIC 9-97 CH-1 identifies the locations and the applications acceptable for FRP gratings.

Identifying Data: USCG letter dated September 13, 2016. Strongwell letters dated May 2 and May 5, 2016.
For Duragrid 38mm only: Intertek Project Nos. 102299027SAT-003A dated November 25, 2015 (ASTM F3059-15 Section 17) and 102429778SAT-003A/B Rev 1 dated February 5, 2016 (ASTM F3059-15 Section 16).
For Duragrid 48mm only: SwRI Project No. 01.14431.01.305 dated February 18, 2009 (ASTM F3059-15 Section 17). SwRI Project No. 01.14430.01.084b dated February 17, 2009 and Intertek Project No. 102337218SAT-001A November 12, 2015 (ASTM F3059 Section 16).

All Duragrid 38mm and 48mm FRP grating reinforcements, resins, adhesives, and construction details are as indicated in the Follow-up Procedure Document, SwRI Project No. 01.28000.02.184 Revision 2, issued July 2016.

Follow-up Program: SwRI.

Manufacturing location: 1610 Highway 82 South, Chatfield, MN, USA.
Valid only for products manufactured at the above location.

Extends certificate dated September 13, 2019.

*** End ***

THIS IS TO CERTIFY THAT the above named manufacturer has submitted to the undersigned satisfactory evidence that the item specified herein complies with the applicable laws and regulations as outlined on the reverse side of this Certificate, and approval is hereby given. This approval shall be in effect until the expiration date herein unless sooner canceled or suspended by proper authority.

GIVEN UNDER MY HAND THIS 05th DAY OF JULY 2019, AT WASHINGTON D.C.

B. A. Baldwin
B. A. BALDWIN
Chief, Lifesaving and Fire Safety Division
BY DIRECTION OF THE COMMANDANT

- 世界最大の引き抜き成型による各種グレーチング
- 各国主要船級取得済
- 80年の長い歴史世界最大のシェア
- 品質管理の徹底(ISO-9001)
- USCG 耐火規格レベル 2 取得済

TYPE APPROVAL CERTIFICATE

STRONGWELL
FIBER REINFORCED PLASTIC GRATING

Confirmation of Product Type Approval

Model Name(s): DL R & ET Series 000

Manufacturer: STRONGWELL, CHATFIELD DIVISION, 1610 HIGHWAY 82 SOUTH, CHATFIELD, Minnesota, United States

Approval of NIPPON KAIJI KYOKAI

Certificate Number: 1940102020/PA 1/20/0024

THIS IS TO CERTIFY that the above types of products have been approved by Nippon Kaiji Kyokai with type approval No. 1940102020/PA 1/20/0024 in compliance with the relevant requirements of the Society's Rules for the Survey and Construction of Steel Ships, as amended.

THIS CERTIFICATE IS VALID FROM 19 June 2019 until 17 June 2020. Issued at Tokyo on 05 August 2019.

NIPPON KAIJI KYOKAI
General Manager
Technical and Regulatory Department

FRP/GRP 製グレーチング素材

● 製品概要

連続引き抜き成型による FRP (Fiber Reinforced Plastics) 製グレーチング、ラダー、ハンドレール等。モールドイング成型による格子型 GRP (Glassfiber Reinforced Polymer) 製グレーチング、この製品は従来の鉄製グレーチング、ラダーなどに代わって設計製造される GRP 製の優れた性能を有した製品です。FRP/GRP 製品を使用することにより、鉄製またはアルミ製のグレーチングに必要とされていた表面処理防錆塗装、腐食による交換作業などから完全に解放される事になります。

● 主力製品 : DURAGRID PHENOLIC

USCG (米国沿岸警備隊) の型式承認を取得したこの製品は、耐火性耐熱性を持たせるために、ビニールエステル樹脂の代わりにフェノール樹脂を使用しています。船舶及び海洋構造物で防火区域などの火災に対する安全性を要求される場所にも使用されており、直接火炎にさらされても有毒ガスが発生しません。厚さ 38 mm のグレーチングは鉄製と比較して 2.53 倍の強度を有しております。

その他の製品 : DURADEK, DURAGRID, DURAGRATE



熱硬化性樹脂

一方向に揃えられたガラス繊維と樹脂を高温で接着

