



NIPPON KAIJI KYOKAI

COPY

# Certificate

Certificate No.  
TA18879E(AL)

OF

## APPROVAL

Item : FRP Grating  
Product name : DURAGRID, DURAGRID PHENOLIC  
Specification : See Annex.  
Application : See Annex.  
Manufacturer : Strongwell Corporation  
1610, Highway 52 South, Chatfield 55923 MN, USA  
Testing standard : Part 2, Chap.9, paragraph 9.4.2 of NK *Guidance for The Approval and Type Approval of Materials and Equipment for Marine Use, 2018 edition,*  
**ASTM F3059-14**  
Test report : See Annex.

THIS IS TO CERTIFY that the above type of products has been approved by Nippon Kaiji Kyokai with type approval No.09CD6FRP as complying with the relevant requirements of the Society's *Rules for the Survey and Construction of Steel Ships*, as amended.

This certificate is valid until 17 June 2019.  
Issued at Tokyo on 8 August 2018.

NIPPON KAIJI KYOKAI

  
H. Kobayashi  
General Manager  
Material and Equipment Department



Initial approval date : 18 June 2009



-Specification-

DURAGRID;

Maximum unsupported span : 1120mm  
Bearing bar thickness : 25mm to 51mm

DURAGRID PHENOLIC;

Maximum unsupported span : 1120mm  
Bearing bar thickness : 38mm and 45mm

Test report:

Test laboratory : Fowler Associates, USA

Report number : CHA0073

Test laboratory : Intertek, USA

Report number : 3152762SAT-001, 3152762SAT-002, 100093535SAT-001, CHA0032, CHA0121, CHA0122, CHA0123, CHA0124

Test laboratory : SwRI, USA

Report number : 01-7520-372, 01.14431.01.309, 01.25555.04.184-100101, 01.25555.04.184-100102a, 01.25555.04.184-100103, CHA0029

Test laboratory : VTEC Laboratories, Inc., USA

Report number : 100-3267-1, 100-3267-2, 100-3267-3

Test laboratory : Microstat Laboratories, USA

Report number : 2013-070

Test laboratory : COMTEC, USA

Report number : CHA0053, CHA0115, CHA0116, CHA0117, CHA0118, CHA0119, CHA0126, CHA0127, CHA0128, CHA0129, CHA0130, CHA0131

Test laboratory : Smith-Emery Laboratories, USA

Report number : CHA0016, CHA0125



## Application

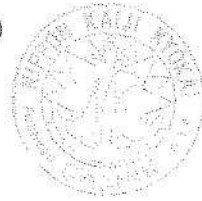
(Based on NK Guidance, ASTM F3059-14)

Location	Service	DURAGRID	DURAGRID PHENOLIC
Cargo Pump Rooms	All personnel walkways, catwalks, ladders, platforms, or access areas	No	No
Machinery Spaces	Walkways or areas which may be used for escape, or access for firefighting, emergency operation, or rescue	No	No
	Personnel walkways, catwalks, ladders, platforms, or access areas other than those described above	No	Yes
Cargo Holds	Walkways or areas which may be used for escape, or access for firefighting, emergency operation or rescue	No	No
	Personnel walkways, catwalks, ladders, platforms or access areas other than those described above	Yes	Yes
Cargo Tanks	All personnel walkways, catwalks, ladders, platforms or access areas	No	Yes
Fuel Oil Tanks	All personnel walkways, catwalks, ladders, platforms or access areas	No	Yes
Ballast Water Tanks	All personnel walkways, catwalks, ladders, platforms or access areas	Yes* <sup>1</sup>	Yes
Cofferdams, void spaces, double bottoms, pipe tunnels and so forth	All personnel walkways, catwalks, ladders, platforms or access areas	Yes* <sup>1</sup>	Yes
Accommodation, service and control spaces	All personnel walkways, catwalks, ladders, platforms or access areas	No	No
Lifeboat embarkation or temporary safe refuge stations in open deck areas	All personnel walkways, catwalks, ladders, platforms or access areas	No	Yes

『ASTM F3059』承認により使用範囲が拡大されました。

Open Decks or semi-enclosed areas	<u>Operational areas and access routes for deck foam firefighting systems on tank vessels</u>	No	Yes
	Walkways or areas that may be used for escape, or access for firefighting systems and AFFF hose reels, emergency operation, or rescue on MODUs and production platforms including safe access to tanker bows	No	Yes
	Walkways or areas that may be used for escape or access for firefighting systems, emergency operation, or rescue other than those described above	No	Yes
	Personnel walkways, catwalks, ladders, platforms, or access areas other than those described above	Yes	Yes

\*1 If these spaces are normally entered when underway, this product cannot be used.



·Test standard·

[Part 2, Chap.9, paragraph 9.4.2 of NK *Guidance for The Approval and Type Approval of Materials and Equipment for Marine Use, 2018 edition*]

Test Standard	DURAGRID	DURAGRID PHENOLIC
Fire integrity	No	Passed (L2)
Fire Retardance	Passed	Passed
Flame Spread and Surface Flammability	No	Passed
Smoke Generation	No	Passed
Toxicity test	No	Passed

[ASTM F3059-14]

Test	DURAGRID	DURAGRID PHENOLIC
Fire integrity	No	Passed (L2)
Flame Spread and Surface Flammability	No	Passed
Smoke Generation	No	Passed

·End·