DNV·GL

Certificate No:
TAF000003X

TYPE APPROVAL CERTIFICATE

This is to certify:

That the FRP Grating

with type designation(s)
INTERGRATE PH-XFR-B, ISO-XFR, VE-XFR, ECO-FR, VE-FR, FD-FR, ISO-FR

Issued to
Fiberstruct, s.r.o.
STRAŽSKÉ, Slovakia

is found to comply with
Det Norske Veritas' Offshore Standards
Det Norske Veritas' Rules for Classification of Ships
Det Norske Veritas' Interpretation of SOLAS 1974 Convention as Amended

Application :

Approved for use in exterior locations except for escapeways or accessways and platforms for fire-fighting equipment. Application is to be considered and accepted for each case/project.

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

This Certificate is valid until **2019-06-30**.

Issued at **Høvik** on **2015-09-15**

for **DNV GL**

DNV GL local station: **Site Office Komarno**

Approval Engineer: **Øyvind Hoff**

Petter Langnes
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

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Job Id: **262.1-002392-3**
Certificate No: **TAF000003X**

Product description

"INTERGRATE® PH-XFR-B, ISO-XFR, VE-XFR, ECO-FR, VE-FR, FD-FR, ISO-FR"
glass fibre reinforced plastic square mesh gratings.

Tests results according to ASTM E84-05:

INTERGRATE®	Flame Spread Index	Smoke Developed Index
PH-XFR-B	0	10
ISO-XFR	10	1100
VE-XFR	10	1100
ECO-FR	25	800
VE-FR	25	800
FD-FR	20	550
ISO-FR	25	600

Application/Limitation

For use in locations according to the below Structural Fire Integrity Matrix.

Structural Fire Integrity Matrix.

Location	Service	INTERGRATE® PH-XFR-B, ISO-XFR, VE-XFR, ECO-FR, VE-FR, FD-FR, ISO-FR
Machinery Spaces	Walkways or areas which may be used for escape, or access for fire fighting, emergency operation or rescue	NO
	Personnel walkways, catwalks, ladders, platforms or access areas other than those described above	NO
Cargo Pump Rooms	All personnel walkways, catwalks, ladders, platforms or access areas	NO
Cargo Holds	Walkways or areas which may be used for escape, or access for fire fighting, emergency operation or rescue	NO
	Personnel walkways, catwalks, ladders, platforms or access areas other than those described above	YES$_1$
Cargo Tanks	All personnel walkways, catwalks, ladders, platforms or access areas	NO
Fuel Oil Tanks	All personnel walkways, catwalks, ladders, platforms or access areas	YES$_1$
Ballast Water Tanks	All personnel walkways, catwalks, ladders, platforms or access areas	YES$_1$
Cofferdams, void spaces, double bottoms, pipe tunnels, etc.	All personnel walkways, catwalks, ladders, platforms or access areas	YES$_1$

(1) If these spaces are normally entered when underway, none of the above gratings may be used.

Accommodation, service, and control spaces	All personnel walkways, catwalks, ladders, platforms or access areas	NO
Lifeboat embarkation or temporary safe refuge stations in open deck areas	All personnel walkways, catwalks, ladders, platforms or access areas	NO
Open Decks or semi-enclosed areas	Walkways or areas which may be used for escape, or access for fire fighting, emergency operation or rescue	NO
	Personnel walkways, catwalks, ladders, platforms or access areas other than those described above	YES
	Gangway for safe access to bow on tankers according to IMO MSC.62(67)	NO

Each product is to be supplied with its manual for installation and maintenance.

Type Approval documentation

Certification in accordance with Standard for Certification No. 1.2, Type Approval, January 2013.

Test report No. 3091933SAT-002 dated 30 June 2006 and Test report No. 3091933SAT-011 dated 12 December, 3091933SAT-009 dated 12 December, 3091933SAT-012 dated 19 December, 3091933SAT-013 dated 11 December, 3091933SAT-008 dated 11 December, 3091933SAT-014 dated 12 December 2006, all from Intertek Testing Services NA, Inc., Texas, USA.

Tests carried out

Tested according to ASTM E84-05.

Marking of product

The product or packing is to be marked with name of manufacturer and type designation.

Periodical assessment

DNV GL's surveyor is to be given permission to perform Periodical Assessments at any time during the validity of this certificate and at least every second year. The arrangement is to be in accordance with procedure described in Standard for certification No. 1.2 Type Approval Item 4.