DNV·GL

Certificate No:
**TAF00000R8**

# TYPE APPROVAL CERTIFICATE

## This is to certify:

**That the FRP Grating**

with type designation(s)
**IIF MOLDED GRATING (IIF 38S26)**

Issued to
**Nantong Shirui Reinforced Plastic Products Co., Ltd**
**Nantong Jiang Su, China**

is found to comply with
**DNV GL offshore standards**
**DNV GL rules for classification – Ships**
**DNV GL statutory interpretations DNVGL-SI-0364 – SOLAS interpretations**

## Application :

**For use in locations according to enclosed Structural Fire Integrity Matrix.**
**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.**

Issued at **Høvik** on **2017-12-11**
This Certificate is valid until **2022-12-10**.
DNV GL local station: **Nantong**

Approval Engineer: **Tessa Biever**

for **DNV GL**

**Mårten Schei-Nilsson**
**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: **262.1-016545-3**
Certificate No: **TAF00000R8**

## Product description

"IIF MOLDED GRATING (IIF 38S26)" is a fire retardant and uv resistant molded grating composed of polyester resin, fiberglass (E glass), fillers (aluminum hydroxide) and color pigment with total density of 1.8 g/m$^3$.

Dimensions: 38 mm x 38mm mesh, 26mm thick
Load bar thickness: top 6.5mm, bottom 5mm

Tests results according to ASTM E84-17:
Flame Spread Index: 25
Smoke Developed Index: 400

## Application/Limitation

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

**Structural Fire Integrity Matrix.**

| **Location** | **Service** | IIF MOLDED GRATING (IIF 38S26)" |
|---|---|---|
| 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 | NO |
| Cargo Tanks | All personnel walkways, catwalks, ladders, platforms or access areas | YES$_{(1,2)}$ |
| 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$_{(1)}$ |
| 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 |

(1) Only if these spaces are normally **not** entered when underway.

(2) Gratings that are electrically conductive shall be required. Acceptance criteria for resistance per unit length and to earth is: < 0,1 M Ω/m and < 1 M Ω to earth.
Test Standard ASTM D257-91 (Ref. DNV TA 1-501-1 (Fibre reinforced Thermosetting Plastic Pipes))

The grating is only evaluated in accordance with fire technical requirements. Other requirements such as strength etc. has to be evaluated in each case.

This grating shall not be installed in areas where it can be exposed to a hydrocarbon fire.

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

## Type Approval documentation

Certification in accordance with Class Programme DNVGL-CP-0338, October 2017.

Test report No. 170823006SHF-BP-1 dated 18 September 2017 from Intertek Testing Services LTD., Shanghai, China.

Technical assessment report no. 171025009SHF-BP-1 dated 2017-10-26 (tests performed iaw ASTM E84-16 are valid wrt ASTM E84-17)

## Tests carried out

Tested according to ASTM E84-17.

## 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 Class Programme DNVGL-CP-0338, Section 4.