

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Horizontal Class B Division**with type designation(s)
B-0 Class Ceiling 308N/315N

Issued to

Daejin SAT Co., Ltd.
ULSAN, KYONGSANGNAM-DO, Republic of Korea

is found to comply with

DNV GL rules for classification – Ships**DNV GL offshore standards****DNV GL statutory interpretations DNVGL-SI-0364 – SOLAS interpretations****Application :****Approved for use as a horizontal fire retarding division of class B-0.****This certificate is recognized by Transport Canada.****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**Issued at **Høvik** on **2021-01-29**This Certificate is valid until **2026-01-28**.for **DNV GL**DNV GL local station: **Ulsan**Approval Engineer: **Marcin Tobiasz****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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Product description

"B-0 Class Ceiling 308N/315N"

Composed of panels suspended below the structural deck.

The ceiling panel can be one of two below types:

1. 308N – ceiling panels made of 0.6 mm galvanized steel sheet insulated with 25 mm mineral wool with density of 80 kg/m³ manufactured by Byucksan Co., Ltd.
2. 315N – ceiling panels made of 0.6 mm galvanized perforated steel sheet (ø1.8 mm) insulated with 25 mm mineral wool with density of 80 kg/m³ manufactured by Byucksan Co., Ltd.

Total panel thickness is 25 mm.

The panels are jointed together by modular carrier profiles (1 mm thick) with screws (Ø4 x 20 mm) and perpendicular cross runner with hanger hook and hanger socket.

Carrier profiles are screwed to the ceiling panels and connected by hanger rods (ø14 mm) to the deck's hanger socket.

For further details, see approved drawings listed under Type Approval documentation below.

Application/Limitation

Approved for use as a horizontal fire retarding division of class B-0.

Max. panel size: 300 mm x 2220 mm (width x height).

Max. distance between modular carriers: 835 mm

Max. distance between modular carriers and bulkhead/connecting profile: 300 mm

Max. distance between hangers and bulkhead/connecting profile in longitudinal directions: 1500 mm

Max. distance between hangers or cross runners in transverse directions: 1300 mm

Any surface materials used have to be approved for smoke and toxicity and low flame spread characteristics to IMO 2010 FTP Code Part 2 and 5 (or IMO FTPC Part 2 and 5 when in compliance with the IMO 2010 FTP Code Ch. 5.2 and 8) when required according to relevant rules.

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

Type Approval documentation

Certification in accordance with Class Programme DNVGL-CP-0338, October 2018.

Test report No. KOMERI-0402-20T1294(E) dated 27 May 2020, from "KOMERI" Korea Marine Equipment Research Institute.

Drawing No. DJ-DCC308N/315NF-0 Rev.1 (10 pages) dated 8 January 2021 from manufacturer.

Tests carried out

Tested according to IMO 2010 FTP Code Part 3.

Marking of product

The product or packing is to be marked with name of manufacturer, type designation and fire-technical rating.

Transport Canada Approval

Based on the procedures laid down in the Transport Canada Publication entitled "Approval Procedures for, Life Saving Equipment and Structural Fire Protection Products (TP 14612)", DNV GL confirms that the product/s listed in this certificate is/are in accordance with Transport Canada's requirements.

Periodical assessment

DNV GL's surveyor is to be given permission to perform Periodical Assessments at any time during the



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Certificate No: **TAF00001GA**

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.