

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Class B Bulkhead**with type designation(s)
B-15 Class Bulkhead DWP 503HNC

Issued to

Daejin SAT Co., Ltd.
ULSAN, KYONGSANGNAM-DO, Republic of Koreais found to comply with
DNV GL offshore standards
DNV GL rules for classification – Ships
DNV GL statutory interpretations DNVGL-SI-0364 – SOLAS interpretations**Application :****Approved for use as a fire retarding division of class B-15.****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 **2019-05-31**This Certificate is valid until **2024-05-30**.for **DNV GL**DNV GL local station: **Ulsan**Approval Engineer: **Joanna Kowalczuk**

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.



Product description

"B-15 Class Bulkhead DWP 503HNC"

consists two layers of 15 mm thick mineral wool with density of 140 kg/m³ (manufactured by BYUCKSAN CO. LTD), separated with 18 mm air gap and covered with 0.6 mm galvanized steel sheets from both sides. The whole air gap is divided with 18 mm thick and 35 wide strips of mineral wool of the same type, 72 mm apart. The insulation layers are glued to the insulation strips. The edges (50 mm wide) of long sides of the panels are fitted with 50 mm thick mineral wool with density of 200 kg/m³ (manufactured by BYUCKSAN CO. LTD) bonded to the steel sheathing by means of adhesive.

Panels are connected together with 0.6 mm thick steel M-Profiles and 3 mm x 30 mm (T x W) spline joints.

Total panel thickness: 50 mm

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

Application/Limitation

Approved for use as a vertical fire retarding division of class B-15.

Max. size of panels: 2480 x 600 mm (H x W)

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.

Any adhesive used, other than the one used during testing, has to be tested for low flame spread characteristics according to IMO 2010 FTP Code part 5

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

Type Approval documentation

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

Test report no. KOMERI-0402-18T3633 dated 28 December 2018 from Korea marine Equipment Research Institute, Busan, Republic of Korea.

Drawing no. DJ-DWP503HNCF-1 rev.1 (6 sheets), dated 22 June 2018 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 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.