

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Horizontal Class B Division**with type designation(s)
B-15 Class Ceiling Panel C-602

Issued to

Sung Mi Co., Ltd.
Gimhae-si Gyeongsangnam-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 horizontal fire retarding division of class B-15.****This certificate is recognized by Transport Canada.****Product approved by this certificate is accepted for installation on all vessels classed by DNV GL.**This Certificate is valid until **2022-02-20**.Issued at **Høvik** on **2017-02-21**DNV GL local station: **Gimhae MC & FIS**for **DNV GL**Approval Engineer: **Tomasz Werchowicz**

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.

Product description

"B-15 Class Ceiling Panel C-602"

is composed of 25 mm thick mineral wool with nominal density of 60 kg/m³ (manufactured by KCC Corporation) covered with 0.6 mm steel sheets on exposed side. Panels are covered on the top with 50mm thick insulation of the same type as above.

Total thickness of the panels is 25 mm + 50 mm (Insulation).

The panels connected by means of tongue-and-groove joint to the 1.6 mm thick, steel main runners. The main runners are fixed to the deck by means of hanger sets (rods: Ø7.8 mm and Ø5.7 mm), which are welded to the deck from one side and from another connected to the main runners.

At the shorter side profiles are connected to the 0.6 mm thick joint profile by means of self-drilling screws (Ø4x19 mm, pitch 300 mm).

The ceiling panels may incorporate inspection hatches:

- Model AH-BL1 (manufacturer: Sung Mi Co., Ltd.),
- Model AH-BL2 (manufacturer: Sung Mi Co., Ltd.).

Both hatches are composed of 1.2 mm steel frame, 25mm thick insulation core made of mineral wool with nominal density of 80 kg/m³ (manufactured by KCC Corporation). Core is covered with 0.6 mm thick steel sheet. Hatch blade is fixed to the frame by piano hinge and are fitted with push button lock with latch (1 pcs. for model AH-BL1 and 2 pcs. for model AH-BL2).

Hatch frame is screwed to the ceiling panels with self-drilling screws Ø4x19 mm (4 screws for model AH-BL1 and 8 screws for model AH-BL2).

Max. distance between main runners:	1400 mm
Max. distance between runner and joint profile/bulkhead:	300 mm
Max. distance between hanger sets (on the main runners):	1200 mm

The panels may be produced at the premises of Site Factory, 311 Yongjeonsaneopdanji-gil, Samnangjin-eup, Miryang-si, Gyeongsangnam-do, Korea.

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-15.

Max. panel width:	300 mm
Max. ceiling opening for installation of hatch AH-BL1:	245 x 245 mm (L x W)
Max. ceiling opening for installation of hatch AH-BL2:	545 x 545 mm (L 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.

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, October 2015.

Test report No. KOMERI-0402-15T0917-1 dated 15th July 2015 from Korea marine Equipment Research Institute.

Tests carried out

Tested according to IMO 2010 FTP Code part 3.



Job Id:
Certificate No: **TAF00000H4**

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.