

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Class A Bulkhead**with type designation(s)
W-150-1

Issued to

You Shin Dan Yeol Co., Ltd.
Ulsan, Republic of Korea

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 :****Approved for use as a vertical fire retarding division of class A-30.****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 **2017-10-11**This Certificate is valid until **2022-10-10**.for **DNV GL**DNV GL local station: **Ulsan**Approval Engineer: **Tessa Biever**

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

"Class A-30 Bulkhead W-150-1"

Consists of a structural steel bulkhead covered with one layer of 40 mm thick mineral wool insulation material (nominal density 150 kg/m³, manufactured by KCC CORPORATION) fitted between, around and inside the stiffeners.

Anchoring of insulation to bulkhead and stiffeners is done with Ø3.0/3.6 x 45 mm welded pins with Ø30-Ø40 washers on top. The vertical and horizontal pin spacing is max. 300mm and min. 50mm.

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

Application/Limitation

Approved for use as a vertical fire retarding division of class A-30.

Any surface materials used have to be approved for smoke and toxicity and low flame spread characteristics (IMO 2010 FTP Code Parts 2 and 5) when required according to relevant rules.

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

Type Approval documentation

Certification in accordance with Class Programme DNVGL-CP-0338, October 2015.

Test report No. KOMERI-0402-17T2283 dated 07 September 2017 from Korea Marine Equipment Research Institute (KOMERI), Busan, Korea.

Drawing Nos.:

- YSDY-W150-1-2017-A dated 2017-07-24
- YSDY-W150-1-2017-B dated 2017-07-24

both 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.