Certificate no.:
TAF00001ZW

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Class A Bulkhead

with type designation(s)
A-30 Class Bulkhead Type W-104

issued to
KCC Corporation Ltd. Gimcheon Plant
Gimcheon, Gyeongsangbuk-do, **Republic of Korea**

is found to comply with
DNV rules for classification – Ships
DNV offshore standards
DNV statutory interpretations DNV-SI-0364 – SOLAS interpretations, Edition July 2021

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.

Issued at **Høvik** on **2025-03-31**
This Certificate is valid until **2030-03-30**.
DNV local unit: **Seoul, CMC Korea**

for **DNV**

Approval Engineer: **Meike Grabau**

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 AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") 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 USD 300 000.

Product description

"A-30 Class Bulkhead Type W-104"
is composed of a structural steel bulkhead insulated with 40 mm thick "Hi-Wool" of density 120 kg/m^3 (from KCC Corporation) between stiffeners and 25 mm thick U-shaped "Hi-Wool" of density 110 kg/m^3 on the stiffeners. Void between stiffeners and bulkhead to be insulated with "Hi-Wool" of density 110 kg/m^3.

The insulation is fixed to the bulkhead and stiffeners by pins (Ø 2.5 - 4.0 mm) and washers (Ø 25 - 35 mm) with max. spacing of 300 mm and max. 150 mm between stiffener pin and bulkhead pin. Spacing between joints and pins is max. 250 mm.

For further details, see documents 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 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

Tests carried out

Tested according to IMO FTPC Part 3 and in compliance with IMO 2010 FTP Code Ch. 5.2 and 8.

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 "Procedures for Approval of Life-Saving Appliances, Fire Safety Systems, Equipment and Products (TP14612)", DNV confirms that the product/s listed in this certificate is/are in accordance with Transport Canada's requirements.

Periodical assessment

DNV'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 DNV-CP-0338, Section 4.

Manufactured by:

KCC Corporation Ltd. Gimcheon Plant, Gimcheon, Gyeongsangbuk-do, Republic of Korea.