



Certificate No:
TAF00001U2

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Class A and B Penetration

with type designation(s)
WC-212-II

Issued to

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

is found to comply with

DNV statutory interpretations DNV-SI-0364 – SOLAS interpretations, Edition July 2021
DNV rules for classification – Ships
DNV offshore standards

Application :

Approved for use as pipe penetration system in class A-60 steel bulkheads.

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 **2023-08-27**

This Certificate is valid until **2028-08-26**.

for **DNV**

DNV local unit: **Ulsan**

Approval Engineer: **Helge Bjørnara**

Jowita Permoda
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 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 300,000 USD.



Form code: TA 251

Revision: 2022-12

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Product description

"WC-212-II",

is a pipe penetration system composed of two steel pipe spools with minimum 1 mm gap, each fully welded to the steel sleeve. The steel sleeve is symmetrically fitted, fully welded to the steel bulkhead.

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

Application/Limitation

Approved for use as a pipe penetration system in class A-60 steel bulkheads. Other applications are subject to case-by-case approval.

For A-0, A-15 and A-30 applications, the penetration shall be insulated as for A-60 and the division is to be fitted with A-60 insulation for a minimum distance of 200 mm around the penetration.

Table 1: Approved single pipe penetration in A-60 steel bulkhead.

Sleeve	Size (OD) [mm]	Pipe material	Pipe diameter (OD) [mm]	Sleeve length [mm]	Min. sleeve thickness [mm]	Penetration position	Penetration Insulation *
Circular	22-463.2 *	Steel	21.7-457.2	100-150	2.3-3	Symmetrical	Fully insulated on one side with 300 mm insulation along pipe from division on both sides of the bulkhead

* Gap between sleeve and pipe spools are to be maximum 3-4 mm.

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

Type Approval documentation

Certification in accordance with Class Programme DNV-CP-0338, September 2021.

Test report No. KOMERI-0402-16T4054-2 dated 22 August 2017 from KOMERI, Busan, Korea.

Drawing No. KCC-GC-2016-10-B-1 dated 25 October 2016 from manufacturer.

Drawing No. KCC-GC-2016-10-B-2 dated 25 October 2016 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 "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.