



TYPE APPROVAL CERTIFICATE

Certificate No. : GCH00551-FP002 **Initial Approval :** 4th December, 2019
Product : Pipe Penetration
Manufacturer : HY-LOK CORPORATION
97, Noksansandan 27-ro, Gangseo-gu, Busan, Korea

Product Description : Model : BHD Union & Welding Adapter
- Intended for : Penetration in A-60 Class Bulkheads & Decks
" See Appendix 1 "

Approval Condition : " See Appendix 1 "

THIS IS TO CERTIFY that the above-mentioned product has been approved in accordance with the relevant requirement of this Society's Rules and / or of the recognized standards as follows and entered in the "List of Approved Manufacturers and Type Approved Equipment".

Pt 8, Ch 1 of the Rules for the Classification of Steel Ships and IMO 2010 FTP Code Annex 1, Part 3.

This Certificate is valid until 3rd December, 2024

Issued at Busan, Korea on 4th December, 2019



This certificate is signed electronically in accordance with IMO FAL.5/Circ.39/Rev.2. Validation and authentication of the certificate can be confirmed from "http://e-cert.krs.co.kr" by using the tracking No (ME19034918815) and certificate No.(GCH00551-FP002).



KOREAN REGISTER OF SHIPPING

*General Manager of
Marine & Ocean Equipment Team*

Note : 1. This certificate will be valid subject to complying with the approval conditions described on the certificate and/or on the Rules of this Society.
2. This certificate will be invalid from the expiry date aforementioned unless the extension or renewal has been granted to the applicant or the manufacturer.
3. Any significant modifications or changes in design or construction to the above product without approval from this Society will render this certificate invalid.
4. Should the specified rules, regulations or standards be amended during the validity of this certificate, the product is to be re-approved by this Society in accordance with the requirements as amended.

Appendix 1

Product Description and/or Approval Condition

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Date of Issue : 4th December, 2019

A. Product Description

1. Product Specification

- 1) The pipe penetration consists of a penetration piece and two bite connectors made of SUS316/SUS316L and welded to bulkheads and decks symmetrically.
- 2) The size of penetration piece is as follows ;
 - ADBUW Type: L Series (6 mm ~ 35 mm) & S Series (6 mm ~ 38 mm)
 - ACBUW Type: Fractional size (1/16" ~ 1-1/2") & Metric Size (2 mm ~ 38 mm)
 - ADCW Type: (6 mm ~ 15 mm) x 15A B.W
 - ACWC Type: (6 mm ~ 15 mm) x 15A B.W
- 3) Pipe penetration are to be partially insulated by Hi wool insulation.
 - For deck: 120 kg/m³, 50 mm thickness
 - For bulkhead: 110 kg/m³, 75 mm thickness
- 4) Tested penetration size(dia.): 6 mm, 15 mm, 38 mm

2. Approved Drawings and Documents

- Drawings Nos. : A-class steel bulkhead (A60) rev.0, A-class steel deck (A60) rev.0, 2017F25D02 rev.0 dated 2017.07.26, 2017F25D04 rev.0 dated 2017.07.26, 2017F25D06 rev.0 dated 2017.07.26, 2017F25D07 rev.0 dated 2017.07.26, 2018H10D01 rev.0 dated 2018.08.20, 2018H10D02 rev.0 dated 2018.08.20, 2018H10D04 rev.0 dated 2018.08.20, 2018H10D06 rev.0 dated 2018.08.20, 2018H10D08 rev.0 dated 2018.08.20, 2018H10D10 rev.0 dated 2018.08.20, 2018H10D13 rev.0 dated 2018.08.20, 2018H10D14 rev.0 dated 2018.08.20, 2018H10D15 rev.0 dated 2018.08.20, 2018H10D16 rev.0 dated 2018.08.20.

3. Test Reports, etc.

- KOMERI-0402-17T2149 dated 14 March 2018 and KOMERI-0402-17T2150 dated 13 March 2018 issued by Korea Marine Equipment Research Institute (KOMERI).

B. Approval Condition

1. Application & Limitation

- 1) Installation on board is to be in accordance with the manufacturer's instructions and approved drawings.
- 2) Unless specifically stated in product specification of this certificate, the penetration does not allow to be used for watertight bulkhead or deck.
- 3) Approval Certificate for Manufacturer (Cert. No. : GCH00551-PA001) is to be retained validly apart from this Approval.

2. Individual Product Cert. and Drawing Approval Requirement

- Individual Product Certification is not required.

3. Marking

- The product or packing is to be marked with manufacturer name and type designation on a suitable position.

4. Others

- Nil

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