



TYPE APPROVAL CERTIFICATE

Certificate No. : CPH42135-PE001 **Initial Approval :** 26th March, 2020
Product : Stainless Steel Pipes and Fittings
Manufacturer : Blucher Metal A/S
Pugdalsevej 1, 7480 Vibbjerg, Denmark
Product Description : Push Fit Pipes and Fittings
Type : BLUCHER® DRAIN MARINE and EUROPIPE

" 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. 5, Ch. 6, Sec. 1 of the Rules for the Classification of Steel Ships and EN 1124.

This Certificate is valid until 25th March, 2025

Issued at Busan, Korea on 26th March, 2020



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 (ME20011328303) and certificate No.(CPH42135-PE001).



KOREAN REGISTER

*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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A. Product Description

1. Product Specification

1) Product type

BLUCHER® DRAIN MARINE	Type
Ship Drains	470, 471, 472, 473, 474, 475, 480, 491
Water Traps	502, 503, 505, 525
Extension Pipes	611

BLUCHER® EUROPIPE	Type
Pipes and fittings	811, 820, 821, 830, 831, 832, 834, 836, 837, 838, 839, 840, 841, 842, 843, 844, 850, 854, 855, 869, 885, 886, 873, 874
Penetration	866, 867, 868, 870, 872, 490

2) Size(Wall Thickness) : DN40(1.0 mm), DN50(1.0 mm), DN75(1.0 mm), DN110(1.0 mm), DN160(1.25 mm), DN200(1.5 mm)

3) Material specification
- Pipes and fittings : AISI316L, AISI304
- Seal : NBR, EPDM, FPM(penetration fitting between decks, used for heat resistant and pipe penetrations)

4) Heat resistance of Seal : NBR(-30/+80 °C), EPDM(-40/+100 °C), FPM(-25/+200 °C)

2. Approved Drawings and Documents

- BLUCHER® Product catalogue for marine drains and pipes approved on 11 February 2020.

3. Test Reports, etc.

- 1) Test report no.1066064 performed under DS/EN1124-1 and DS/EN1124-2 at Danish Technological Institute on 18 Oct. 2002.
- 2) Test report no.225392 performed under DS/EN1124-4 at Danish Technological Institute on 1 Oct. 2007.
- 3) Test report no.412491-1 performed under DS/EN1124-1-4 at Danish Technological Institute on 17 Dec. 2010.
- 4) Vibration test report no. DANAK-19/12350 performed at DELTA Denmark on 16 Aug. 2012.
- 5) Test report no.60175162-002 performed under EN1124-1:2000 at TUV Rheinland on 20-21 Aug. 2018.
- 6) Test report no.857304 performed under EN1124-1:2000, 2:2014 and 4:2013 at Danish Technological Institute on 15-27 Feb. 2019.

B. Approval Condition

1. Application & Limitation

- 1) The pipe system is to be used for non-pressurized and vacuum line;
 - Waste water systems(Gravity or vacuum discharge systems, garbage disposal systems) above freeboard deck, below in enclosed spaces and machinery spaces without direct overboard connection.
 - Vent pipes for sanitary discharge system.
 - Outside drainage(scuppers and pipes which are located on weather decks or balconies)
- 2) Pipe penetrations through watertight bulkheads and fire bulkheads are not covered by the approval.
- 3) The pipes are to be installed in accordance with manufacturer's instruction.

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2. Individual Product Cert. and Drawing Approval Requirement

- Individual Product Certification is not required.

3. Marking

- The product is to be marked with manufacturer's name or trademark, a date of manufacture, size, type designation number at least.

4. Others

N/A

[End of Certificate]

