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Certificate No: LR22419510TA-01 Issue Date: 07/02/2023

Issue Date: 07/02/2023 Expiry Date: 25/07/2027

Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

Manufacturer BLÜCHER Metal A/S

Address Pugdalvej 1, Vildbjerg, 7480, Denmark

Type Pipes and Fittings

Description TYPES:

470, 471, 472, 473, 474, 475, 479, 480, 485, 490, 491, 499, 502, 503, 505, 525, 610, 611, 811, 820, 821, 825, 830, 831, 832, 834, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 847, 850, 854, 855, 859, 866, 867, 868, 869, 870, 872, 873, 874, 875, 878,

885 & 886

670 MarineLine Channel 672 MarineLine Channel 660 MarineLine Channel 662 MarineLine Channel 651 MultiLine Channel 178 WaterLine Channel 275 WaterLine Channel

699 Special channels with push/fit connection

Trade Name Stainless Steel Sanitary Pipe System/ EuroPipe

1. For use in non-pressurised and vacuum sanitary discharge systems above the freeboard deck and in enclosed spaces, but not leading overboard bellow

the freeboard deck.

2. May also be used below the freeboard deck in systems that do not cross

watertight bulkheads.

3. The pipe penetrates a watertight bulkhead, it should be fitted with a remote

Vahid Saremi Shahab

Lead Offshore Piping Specialist to Lloyd's Register EMEA

A member of the Lloyd's Register group

71 Fenchurch Street, London, EC3M 4BS, United Kingdom

Application

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operated valve at each watertight bulkhead. The valve is to be controlled from outside the damage zone of the ship.

- 4. Also as tank vent pipes from non-pressurised tanks (tanks that can not be pumped up), but not from structural tanks below the freeboard deck, or tanks that contain flammable fluids.
- 5. Outside drainage (Scuppers and pipes which are located on weather decks or balconies.
- 6. Food waste systems (Scupper and pipes which are located on weather decks or balconies)

Specified Standard

Lloyd's Register Rules and Regulations for the Classification of Ships July 2021

EN 1124

Blucher Specification and Product Catalogue (October 2022 – 25094)

Ratings

Outside diameter from 40 mm to 200 mm Temperature (Minus) - 40 to +100°C

Other Conditions

- 1. Pipes and fittings are to be selected, installed and tested in accordance with the manufacture's instructions and recommendations.
- 2. The integrity of watertight bulkheads, fire division and shell plating are not to be impaired.
- 3. The piping system is not to be utilised where high amplitude and rapid pulsation of pressure are anticipated.

This certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid Certificate.

Previous Version: 92/00041(E7)

The Design Appraisal Document LR22419510TA-1 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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LLOYD'S REGISTER TYPE APPROVAL – DESIGN APPRAISAL DOCUMENT

Issue by: UK&I Technical Support Office
Issued to: Blücher Metal A/S

For: EuroPipe Stainless Steel Sanitary Pipe System

The undernoted documents have been reviewed for compliance with the requirements of the Lloyd's Register Type Approval System Procedure TA14 Version 04 (September 2020) and this Design Appraisal Document forms part of the Certificate.

This certificate is a renewal of certificate No. 92/00041(E7)

APPROVAL DOCUMENTATION

Application for Type Approval Amendment	28 April 2022
Production Quality Assessment Form (PQA)	08 Sep 2022
Quality Management System ISO 9001 & ISO 14001 valid until Oct.2023	2020-2023
Declarations of Performance for the BLÜCHER EuroPipe system	2021

Previous documentation as listed in Design Appraisal Documents 92/00041, 92/00041(E1), 92/00041(E2), 92/00041(E3), 92/00041(E4), 92/00041(E5), 92/00041(E6), 92/00041(E7)

Roubik Allahverdi Principal process plant and machinery specialist & Technical lead UK&I TSO Marine & Offshore Lloyd's Register EMEA Vahid Saremi Shahab Lead Offshore Piping Specialist UK&I TSO Marine & Offshore Lloyd's Register EMEA

Supplementary Type Approval Terms and Conditions

Type Approval certifies that a representative sample of the product(s) referred to herein has/have been found to meet the applicable design criteria for the use specified herein. It does not mean or imply approval for any other use, nor approval of any product(s) designed or manufactured otherwise than in strict conformity with the said representative sample.

Type Approval is based on the understanding that the manufacturer's recommendations and instructions and any relevant requirements of the Rules and Regulations are complied with.

Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations.Lloyd's Register EMEA reserves the right to cancel or withdraw this Type Approval Certificate in accordance with the Lloyd's Register Type Approval System Procedure.

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