

TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate no.:
MERB0001N3Y
Revision no.:
0

This Certificate is issued by DNV UK Limited based on authorisation of the Maritime & Coast Guard Agency (MCA) as an UK Approved Body to undertake conformity assessments on marine equipment in accordance with the requirements of the Merchant Shipping (Marine Equipment) Regulations 2016 as amended.

This is to certify:

that the **Penetrations through 'A' class divisions: - pipe, duct, trunk, etc. penetrations**

with type designation(s)
BLÜCHER CLASS A PIPE PENETRATION

issued to
BLÜCHER Metal A/S
Vildbjerg, Denmark

is found to comply with the Regulation (UK) **MSN 1874 Amendment 10** for
Item no. **UK/3.26b (Row 1 of 1)**
according to the following requirements:
SOLAS 74 Reg. II-2/9, IMO MSC.1/Circ. 1276/Rev.1, IMO MSC.1/Circ.1655

Further details of the equipment and conditions for certification are given overleaf.

Date of issue: **2025-12-10**

Expiry date: **2030-12-09**

DNV local unit:
Denmark CMC



for **DNV UK Ltd.**

Approval Engineer:
Marcin Tobiasz

Approved Body No.: **0097**

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Christine Mydlak-Röder
MER Service Responsible



**Maritime &
Coastguard
Agency**

UK Approved Body Authorised
by the MCA

This certificate will not be valid if the manufacturer makes any changes or modifications to the approved type of equipment, which have not been notified to, and agreed with the approved body named on this certificate.
During the period of validity of this certificate the applicable regulations (international conventions and the relevant resolutions and circulars of the IMO) and testing standards may change, therefore the product conformity may need to be re-assessed by the Approved Body.
"The Mark of Conformity" may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-control phase module (D, E or F) of Schedule 2 of the Merchant Shipping (Marine Equipment) Regulations 2016, as amended is fully complied with and controlled by a written inspection agreement with an approved body. In case limitations of use apply, these should be indicated in the Annex.

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

"BLÜCHER Class A Pipe Penetration"

Penetration system for Blücher pipes type 866, 868 and 870 composed of steel sleeves/flanges welded to the bulkhead/deck and Blücher pipes welded to the sleeve.

Application/Limitation

Approved for use as pipe penetration system in class A-0, A-30 and A-60 in steel bulkheads and steel decks as specified in the Appendix. Other applications are subject to case-by-case approval.

For installation details and coverage, please see Appendix: Application/Limitation.

The pipe penetrations insulated to A-60 and A-30 may also be used in A-15 and A-0 class divisions if the pipe penetrations are insulated as required for A-60 and A-30 class divisions respectively and in addition the division is to be insulated at least 200 mm around the penetration.

The insulation material used has to be approved according to the Marine Equipment Regulation and bear the Mark of Conformity.

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

Please see Appendix: Application/Limitation

Type Examination documentation

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 and address of manufacturer, type designation, fire technical rating, Mark of Conformity and USCG approval if applicable (see first page).

APPENDIX

Application/Limitation

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Table 1: Approved single pipe penetration in A-0, A-30 and A-60 steel bulkhead.

Type	Penetration size [mm]	Pipe material	Pipe diameter (OD) [mm]	Sleeve length [mm]	Sleeve thickness [mm]	Sealing type	Sleeve position	Penetration Insulation ^{1), 2), 3), 4)}
866	50 – 210	Stainless steel	40 – 200	50 – 150	5 – 6	SI	Any	S-0377-300 S-0377-308 S-0377-363
866.032	60	Stainless steel	32/50 – 40/50	50	5	EPDM	Symmetric ⁵⁾	S-0377-334
868	90 – 260	Stainless steel	40 – 200	flange	5 – 6	SI	Either	S-0377-301 S-0377-330 S-0377-364

- 1) A-0 penetrations are uninsulated, except for 866.032 Ø32, which shall be fully insulated + 300 mm along pipe.
- 2) A-30 penetrations shall be fully insulated + 450 mm to 1500 mm along pipe according to listed drawings.
- 3) A-60 penetrations shall be fully insulated + 450 mm to 2000 mm along pipe according to listed drawings.
- 4) Insulated used shall be SeaRox WM 640 (density 105 kg/m³, manufactured by Rockwool) with thickness and length according to listed drawings or A-60 approved bulkhead insulation with length according to listed drawings.
- 5) At least 5 mm of sleeve shall protrude on both sides.

Table 2: Approved single pipe penetration in A-0, A-30 and A-60 steel deck.

Type	Penetration size [mm]	Pipe material	Pipe diameter (OD) [mm]	Sleeve length [mm]	Sleeve thickness [mm]	Sealing type	Penetration position	Penetration Insulation ^{1), 2), 3), 4)}
866	50 – 210	Stainless steel	40 – 200	50 – 150	5 – 6	SI	Any	S-0377-300 S-0377-308 S-0377-363
866.032	60	Stainless steel	32/50 – 40/50	50	5	EPDM	Symmetric ⁵⁾	S-0377-334
868	90 – 260	Stainless steel	40 – 200	flange	5 – 6	SI	Underside	S-0377-301 S-0377-330 S-0377-364
870	90 – 235	Stainless steel	40 – 200	100 – 120	5 – 6	SI	Underside	S-0377-302 S-0377-331 S-0377-365

- 1) A-0 penetrations are uninsulated, except for 866.032 Ø32, which shall be fully insulated + 500 mm along pipe.
- 2) A-30 penetrations shall be fully insulated + 400 mm to 1000 mm along pipe according to listed drawings.
- 3) A-60 penetrations shall be fully insulated + 450 mm to 1000 mm along pipe according to listed drawings.
- 4) Insulated used shall be SeaRox WM 640 (density 105 kg/m³, manufactured by Rockwool) with thickness and length according to listed drawings or A-60 approved bulkhead insulation with length according to listed drawings.
- 5) At least 5 mm of sleeve shall protrude on both sides.