



DET NORSKE VERITAS

EC TYPE EXAMINATION CERTIFICATE

Application of: Council Directive 96/98/EC of 20 December 1996 on Marine Equipment as amended by directive 2011/75/EU, issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Directorate. This Certificate is issued by Det Norske Veritas under the authority of the Government of the Kingdom of Norway.

CERTIFICATE NO. **MED-B-8556**

This is to certify that the
Penetrations through "A" class divisions: pipe, duct, trunk, etc penetrations

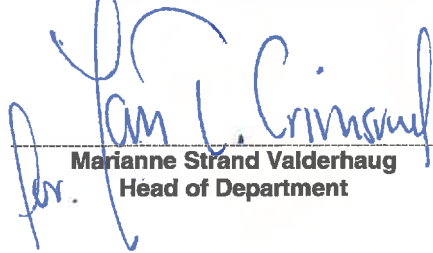
with type designation(s)
RISE/NOFIRNO - SINGLE AND MULTI PIPE AND MULTI-MIX PIPE + CABLE PENETRATION

Manufacturer
BEELE Engineering bv/CSD International bv
AALTEN, Netherlands

is found to comply with the requirements in the following Regulations/Standards:
Annex A.1, item No. A.1/3.26b and Annex B, Module B in the Directive. SOLAS 74 as amended, Regulation II-2/9, IMO MSC/Circ.1276 and IMO FTP Code

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

Høvik, 2013-09-20
for Det Norske Veritas AS


Marianne Strand Valderhaug
Head of Department

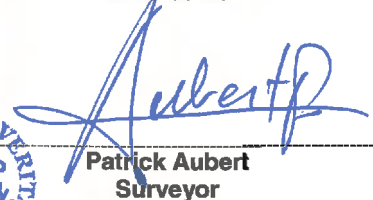


Notified Body No.: **0575**

DNV local office:
Rotterdam

This Certificate is valid until
2018-09-20




Patrick Aubert
Surveyor



The Certificate is subject to terms and conditions overleaf. Any significant changes in design or construction of the product, or amendments to the Directive or Standards referenced above may render this Certificate invalid. The product liability rests with the manufacturer or his representative in accordance with Council Directive 96/98/EC, as amended. The Mark of Conformity may only be affixed to the product and a Declaration of Conformity may only be issued when the production/product assessment module referred to in the council directive, is fully complied with.



Certificate No.: MED-B-8556
Item No.: A1/3.26b
Job Id.: 344.1-001477-2

Product description

“RISE/NOFIRNO – Single and Multi Pipe and Multi-Mix Pipe + Cable Penetration”

composed of a steel sleeve (length 180 mm or 250 mm – see drawings listed below) welded or bolted to steel deck or bulkhead, NOFIRNO Filler Sleeves filling the open space between sleeve and pipe.

For insulated copper pipe penetration, RISE/ULTRA shell of thickness 2,5 mm shall cover the insulated pipes over a length of 210 mm.

For Multi-Mix Pipe + cable penetration, RISE sleeves installed around the cables and RISE/ULTRA strips/sleeves around the plastic pipes.

The penetration is sealed on both ends with a layer of 20 mm NOFIRNO Sealant.

Application/Limitation

Single pipe penetrations:

- Approved for A-0 penetrations for steel, copper and GRP service pipes of following maximum sizes:

Steel: Ø 408 mm; Copper: Ø420 mm; GRP: Ø 408 mm.

See drawings Nos. R0207E Rev. 2 and R0213E Rev. 1.

- Approved A-0 to A-60 penetrations for insulated (Armaflex AF or equivalent) copper pipes of outside diameter up to 54 mm and for Insulated steel pipes up to Ø 168 mm.

Maximum sleeve size: Max. Ø 273 mm.

See drawings Nos. R0246E Rev. 1, R0247E Rev. 1, R0248E Rev.1 and R0249 Rev. 0.

Multi-pipe penetrations:

- Approved A-0 to A-60 single and multi-pipe penetrations for steel/SS pipes up to Ø 408 mm, for Cu/CuNi pipes up to Ø 420 mm and GRP pipes up to Ø 408 mm.

Maximum sleeve size: Max. allowable surface area: 2500 cm² (500 x 500 mm).

See drawings Nos. N0009E Rev. 2 and N0011E Rev. 2.

- Approved A-0 to A-60 single and multi-pipe penetrations for steel/SS pipes up to Ø 168 mm and for Cu/CuNi pipes up to Ø108 mm.

Maximum sleeve size: Max. allowable surface area: 3000 cm² (1000 x 300 mm).

See drawings Nos. N0018E Rev. 2 and N0020E Rev. 1.

- Approved A-0 multi-pipe penetrations for steel/SS pipes up to Ø 219 mm.

Maximum sleeve size: Max. allowable surface area: 1800 cm² (600 x 300 mm).

See drawings Nos. N0045E dated 04.06.12.

Multi-Mix pipe + cable penetrations:

- Approved A-0 to A-60 penetrations for a mix of cables up to Ø 105 mm (incl. CLX and LAN cables), steel/SS pipes up to Ø 168 mm, for Cu/CuNi pipes up to Ø 108 mm and plastic pipes (PVC, PP, PPR, HDPE, PB, PVDF) up to Ø 160 mm.

Maximum sleeve size: Max. allowable surface area: 3000 cm² (1000 x 300 mm).

See drawings Nos. N0015E, N0016E and N0017E, all Rev. 2.

The installation of the pipe penetration is to be in accordance with the manufacturer installation manual and enclosed approved drawings.

For A-0 divisions, no insulation is needed on the sleeves and the pipes.

Approved for watertight penetrations up to a design pressure of 1.66.

Approved for airtight penetrations up to a design pressure of 1.0 bar.

The penetration system is generally not to be used for penetrating boundaries of tanks.

When requested to be used in watertight bulkheads on passenger ships and Special Purpose Ships (SPS), pipe penetration system has to comply with the requirements given in SOLAS Ch. II-1 Reg. 13.2.3 (2009 issue).

Penetrations passing through watertight bulkheads are subject for separate examination and approval by actual flag administration.

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





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Type Examination documentation

Test report WARRES No. 104226 dated 13 October 1998 and WARRES No. 104228 dated 19 October 1998 from Warrington Fire Research Centre Ltd, Warrington, United Kingdom.

Test reports Nos. R0209, R0325 and R0556 all dated July 2008 from Efectis Nederland BV (TNO).

Test report No. 0303-010 dated 21 March 2003, No. 0501-039 dated 11 January 2005, No. 0609-056 dated 19 September 2006, No. 0712-060 dated 12 January 2007, No. 0702-061 dated 1 February 2007, No.0704-067 dated 18 April 2008, No. 0706-070 dated 26 June 2008, No. 0805-080 dated 21 May 2008 and No. 1206-104 dated 5 June 2012, all from Beele Engineering. Statement dated 5 October 2006 and 13 February 2007, both from TNO, Netherlands.

Tests carried out

Tested according to IMO FTPC Part 3 (IMO Resolution A.754 (18)) and in accordance with IMO 2010 FTP Code Ch. 8.

Marking of product

The product or packing is to be marked with name of manufacturer, type designation, fire technical rating, MED Mark of Conformity and USCG marking if applicable (see below).

Mark of Conformity

The manufacturer is allowed to affix the Mark of Conformity according to Article 11 in the Council Directive 96/98/EC on Marine Equipment and shall issue a Declaration of Conformity, only when the module D or E or F of Annex B in the same directive is fully complied with.

Module D: The quality system for production and testing shall be approved by the Notified Body.

Module E: The quality system for inspection and testing shall be approved by the Notified Body.

Module F: Compliance of the products to type as described in this EC Type-Examination Certificate must be verified by the Notified Body who also shall issue a Certificate of Conformity.

USCG Approval

A U.S. Coast Guard approval number will be assigned to the equipment when the production module has been completed and will appear on the production module certificate (module D, E or F), as allowed by the "Agreement between the European Community and the United States of America on mutual recognition of certificates of conformity for marine equipment" signed 27 February 2004, and the "Agreement between the United States of America and the EEA EFTA states on mutual recognition of certificates of conformity for marine equipment" signed 17 October 2005.

U.S. Coast Guard Module B number: 164.138/EC0575

