



# 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-8559**

This is to certify that the  
**Penetrations through "A" class divisions**

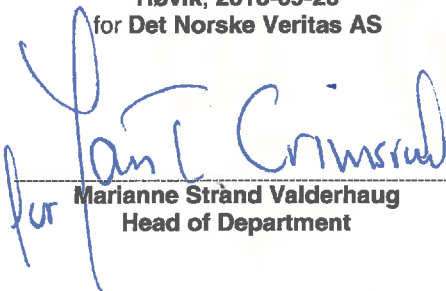
with type designation(s)  
**RISE/ULTRA CRUSHER - NOFIRNO - SINGLE AND MULTI-PLASTIC PIPE AND MULTI-MIX PIPE + CABLE PENETRATION**

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-8559  
Item No.: A.1/3.26  
Job Id.: 344.1-001477-2

## Product description

"RISE/ULTRA CRUSHER - NOFIRNO - SINGLE AND MULTI-PLASTIC PIPE AND MULTI-MIX PIPE + CABLE PENETRATION", penetration system for plastic pipes, insulated pipes and cables,

composed of a steel/aluminium sleeve of length 250 mm (180 to 200 mm for RISE/ULTRA crusher Single Plastic Pipe penetrations) welded or bolted to steel/aluminium bulkhead or deck, RISE/ULTRA sheets wrapped or RISE/ULTRA crusher/wrap or insert sleeves placed around the plastic pipes in a thickness of 2-20 mm depending on the diameter of the ducted pipe (only filler sleeves for separation of the steel pipes in multi-mix penetrations, min. separation 25 mm) and filling the remaining space in the conduit with RISE or NOFIRNO Filler Sleeves.

For insulated (Armaflex AF or equivalent material) steel or copper pipes, a 2.5 mm thick RISE/ULTRA sleeve shall cover the insulated pipe over a length of 210 mm.

The penetrations are to be sealed on both sides with a layer of 20 mm NOFIRNO Sealing Putty. For the single plastic pipe penetrations RISE/ULTRA crusher/wrap where watertightness is not required, no sealant is needed.

See penetrations details below.

### Single pipe penetrations RISE/ULTRA crusher:

Approved A-0 to A-60 penetrations according to drawings Nos. R0256E, R0257E and R0258E, all Rev. 2 dated 22.08.08, and R0262E, R0264E Rev.1 dated 22.08.08, and R0265E and R0267E both Rev. 2 dated 19.09.08.

Approved for Thermoplastic pipes (PVC, PP, PPR, PPFR, ABS, HDPE, PB, PVDF) of outside diameter up to 160 mm. The sleeve is to be insulated on underside for deck and on unexposed side for bulkhead with 25 mm mineral wool of minimum density 110 kg/m<sup>3</sup>.

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-mix pipe+cable penetrations (plastic pipes, steel pipes and cables):

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 cm<sup>2</sup> (1000 x 300 mm).

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

The installation of the penetrations is to be in accordance with the following applications/limitations and enclosed approved drawings.

## Application/Limitation

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

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

Water-/air-tightness approval is not valid for RISE/ULTRA crusher penetration system without sealant on both sides of the sleeve and for insulated pipe penetration.

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, use and maintenance.

## Type Examination documentation

Test report WARRES No. 114525/A dated 21 September 2000 and WARRES No. 114524 dated 26 September 2000 from Warrington Fire Research Centre Ltd, United Kingdom.

Test reports Nos. 2002-CVB-R06449 and 2002-CVB-R06450 dated November 2002 from TNO, Delf, Netherlands.

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



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Test report No. 0311-018 dated November 2003, No. 0401-023 dated 7 January 2004, No. 0404-030 dated 6 April 2004, No. 0408-036 dated 30 August 2004, No. 0610-057 dated 31 October 2006, No. 0704-067 dated 18 April 2007 and No. 0706-070 dated 26 June 2007, No. 0708-072 dated 8 August 2007, No. 0608-053 dated 16 August 2006, No. 0705-063 dated 2 May 2007, 0712-078 dated 19 December 2007 and No. 708-072 dated 8 August 2008, all from Beele Engineering.

Pressure test reports No. 9809-D010 dated 10.09.1998 and Nos. 9909-D012, 9909-D013, 9909-D014 all dated 01.09.1999 from the manufacturer.

### Tests carried out

Tested according to IMO FTPC Part 3 (IMO Resolution A.754 (18)) and in compliance 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, Mark of Conformity and USCG approval number 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

