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# DET NORSKE VERITAS

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## TYPE APPROVAL CERTIFICATE

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**CERTIFICATE NO. F-19092**  
This Certificate consists of 3 pages

*This is to certify that the*  
**Class A and B Penetration**

*with type designation(s)*  
**Modular and Circular Cable Transits E11 to E33, E-40 DN to E-120 DN**

*Manufactured by*  
**Técnicas Eléctricas Mayra, S.L.**  
GIJON, Spain

*is found to comply with*  
Det Norske Veritas' Offshore Standards  
Det Norske Veritas' Rules for Classification of Ships  
Det Norske Veritas' Interpretation of SOLAS 1974 Convention as Amended

*Application*  
Approved for use as a cable penetration system in class A-30 bulkhead and A-60 decks for approved ship cables.

*Place and date*  
Høvik, 2009-08-25  
for DET NORSKE VERITAS AS

Petter Langnes  
Head of Section



Local Office  
DNV Bilbao

*This Certificate is valid until*  
2013-06-30

Amir Dzaferi  
Surveyor

**Notice: This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.**

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.



Cert. No.: F-19092  
File No.: 471.19  
Case No.: 262.1-007193-1

## Product description

“Modular and Circular Cable Transits: E11 to E33, E-40 DN to E-120 DN”  
composed of circular or rectangular steel frame according to drawings mentioned below, and fitted with Neopreno SL insert modules. The steel frame is welded in top of the deck and into the bulkhead and insulated with 75 mm mineral wool PAROC F110L with density 98 kg/m<sup>3</sup>. Additional two layers of 75 mm PAROC F110L is fitted between and around the cable system.

## Application/Limitations

Approved for penetrations in steel bulkheads or steel decks limited to a pressure of 2.67 bar water tightness and 30 mbar gas tightness (test pressure 4 bar and 45 mbar respectively). Penetration systems are not to be used for penetrating boundaries of tanks.

No more than 40% of the inside cross sectional area of each transit should be occupied by cables. Also, the cables shall not touch each other or the steel sleeve.

When requested to be used in watertight bulkheads on passenger ships and Special Purpose Ships (SPS), the 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.

The penetrations are to be installed as approved drawings listed below.

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

## Type Approval documentation

Certification in accordance with Certification Note No. 1.2, Type Approval, April 2009.

Test reports No. 3187/98 and No. 3437/98 dated 3 June 1999 from AFITI LICOFF Fire Resistance Laboratory Spain.

Drawings for steel frames No. 4.2.10, 4.2.30, 4.2.40, 4.2.50 dated 25 February 1998 from Tecnicas Electricas Mayra.

Drawings No.4.1.20-D and No.4.1.30-D dated 25 February 1998 from Tecnicas Electricas Mayra.

Retention Survey Report dated 23 January 2009 from DNV Bilbao.

Watertightness and gastightness Survey Report GIJ-09-0035 dated 29 April 2009 from DNV Bilbao

Tested according to IMO FTPC Parts 3 (IMO Res.754(18)).



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### Marking of product

The product or packing is to be marked with name of manufacturer, type designation and fire technical rating.

### Certificate retention survey

Det Norske Veritas' surveyor is to be given permission to perform Certification Retention Surveys at any time during the validity period of this certificate and at least every second year. The arrangement is to be in accordance with procedure described in item 4.3, Certification Note No. 1.2.

END OF CERTIFICATE



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