

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED). This Certificate is issued by DNV GL SE based on the notification of the Federal Maritime and Hydrographic Agency of Germany.

This is to certify:

That the Penetrations through "A" class divisions: electric cable transits

with type designation(s)
Cable Frames S950

Issued to

Taicang Huangjing Marine Fittings Factory
TAICANG, JIANGSU, China

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2018/773**,
item No. MED/3.26a. SOLAS 74 as amended, Regulation II-2/9 and IMO 2010 FTP Code

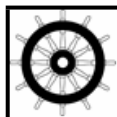
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2024-01-23**.

Issued at **Hamburg** on **2019-01-24**

DNV GL local station:
Shanghai

Approval Engineer:
Carsten Hunsalz



Notified Body
No.: **0098**

for **DNV GL SE**

Sven Dudzus
Head of Notified Body

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 February 27th, 2004.

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-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU. This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV GL SE of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled. Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.



Product description

"Cable Frames S950"

composed of a steel frame welded to the steel bulkhead/deck, filled with S950 inorganic sealing with density 1500 kg/m³ and sealed with 25 mm thick expansion cable sealant type SW from exposed and/or unexposed side.

For more information see table below:

	Class A-0 S950/A0T ¹⁾²⁾³⁾⁴⁾⁵⁾ S950/A0K ¹⁾²⁾⁴⁾⁵⁾	Class A-60 S950/A60T ¹⁾²⁾³⁾⁴⁾⁵⁾ S950/A60K ¹⁾²⁾³⁾⁴⁾⁵⁾
Min. sleeve dimension [mm]	L150 x W80 x D200 Ø 40 x D250	L150 x W80 x D200 Ø 40 x D250
Max. sleeve dimension [mm]	L550 x W200 x D200 Ø 100 x D 250	L950 x W200 x D200 Ø 100 x D 250
Frame thickness	4 - 10 mm	4 - 10 mm
Penetration length	150 - 200 mm	150 - 200 mm
SW sealant on exposed side	Yes	Yes
SW sealant on unexposed side	Yes	Yes
Max. diameter of one cable:	48 mm	48 mm
Notes: 1) T - deck, K - bulkhead. 2) Minimum distance between cables and coaming is to be 6 mm. 3) The steel frame on stiffened side to be insulated with two layers of 20 mm Changan ceramic wool, density 170 kg/m ³ (manufactured by Jiangsu Province Changzhou City Heat-insulating Material Factory). 4) The steel frame is to be located symmetrically in bulkhead/deck. 5) Maximum cable filling rate is to be 40 %.		

For further details, see installation drawings of the test reports listed under Type Examination documentation below.

Application/Limitation

Approved for use as a cable penetration system in class A-0 to A-60 steel bulkheads and decks.
Approved for use in class A-15 and A-30 when the penetration system is insulated as A-60 at least 200 mm around the penetration.

Maximum filling ratio of 40%.

Penetration systems are not to be used for penetrating boundaries of tanks.

Each product is to be supplied with its manual for installation and maintenance. The manual should include the installation drawings of the test reports listed under Type Examination documentation.

Type Examination documentation

S950/A60K: Test Report No. FT13093 dated 25 April 2013,
FT13169 dated 25 June 2013,
FT14150 dated 12 June 2014,
S950/A60T: Test Report No. FT13094 dated 25 April 2013,
FT14151 dated 16 June 2014.
S950/A0K: Test Report No. FT13091 dated 22 April 2013.
S950/A0T: Test Report No. FT13092 dated 22 April 2013.

All test reports from "FEFTC" Far East Fire testing Centre, Shanghai, China.

Tests carried out

- IMO Res. MSC.307(88)-(2010 FTP Code), Annex 1: Part 3,
- MSC.1/Circ. 1488

Marking of product

For identification to this type examination certificate the product or packing is to be marked with:

- Manufacturer's name
- Type designation and fire-technical rating
- Mark of Conformity

According to Article 10 of the Council Directive (MED):

- The wheel mark shall be affixed visibly, legibly and indelibly to the product or to its data plate and, where relevant, embedded in its software. Where that is not possible or not warranted on account of the nature of the product, it shall be affixed to the packaging and to the accompanying documents.
- The wheel mark shall be affixed at the end of the production phase.
- The wheel mark shall be followed by the identification number of the notified body, where that body is involved in the production control phase, and by the year in which the mark is affixed.
- The identification number of the notified body shall be affixed by the body itself or, under its instructions, by the manufacturer or the manufacturer's authorized representative.

For specific products, manufacturers may use an appropriate and reliable form of electronic tag instead of, or in addition to, the wheel mark.

Appendix

Additional application/information for watertightness/gastightness (Not part of the Marine Equipment Directive requirement)

Application/Limitation

Approved for water tightness up to a design pressure of 0.167 MPa (1.67 bar),
test pressure 0.25 MPa (2.5 bar).

Approved for gas tightness up to a design pressure of 0.013 MPa (0.13 bar),
test pressure 0.02 MPa (0.2 bar).

Type Approval documentation

Watertight/Airtight test report No. TCPCR-WT/AT-13-2 dated 29 July 2013,
TCPCR-WT/AT-14-4 dated 16 May 2014
TCPCR-WT/AT-17-1 dated 12 Dec. 2017

Tests carried out

Pressure tests according to DNVGL-CP-0165 Sec. 2 Ch. 4.

END OF CERTIFICATE