DNV·GL

Certificate No:
MEDB000049K

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)
SG-MT01

Issued to
Shanghai Siaco New Materials Technology Co.,Ltd
Shanghai, 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 **2024-05-13**.

Issued at **Hamburg** on **2019-05-14**

DNV GL local station:
Shanghai

Approval Engineer:
Carsten Hunsalz

Notified Body
No.: **0098**

for **DNV GL SE**

Gerhard Aulbert
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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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 penetration system SG-MT01 composed of:

4 to 10 mm thick and 140 mm long steel sleeve for bulkheads and decks, 100 mm filling of rubber insert sleeves type SG-T with 20 mm fire resistant sealant type SG-M at each end of the sleeve for bulkhead and deck applications. The space between cables and inside of frame shall be ≥6mm. The space between cable and cable shall be ≥ 3mm.

A-0 Bulkhead penetration:

The coaming is welded symmetrically of the bulkhead.

Installation details according drawing No. A0-2-C, A0-C01 to A0-C07 (of Fire Test Report FT18251)

Application Bulkhead	Size (mm) (W x H x D) Min.	Size (mm) (W x H x D) Max.	Minimum filling rate (%)	Maximum filling rate (%)	Coaming position in bulkhead	Cables-Maximum Diameter (mm)	
Oval	60x40x140	600x400x140	0,34	36	symmetrically	60,5	
Round	32Øx140	219Øx140	0,2	36	symmetrically	42	

A-60 Bulkhead penetration:

The coaming is welded symmetrically of the bulkhead.

Installation details according drawing No. A60-2-C, A60-C01 to A60-C07 (of Fire Test Report FT18312)

Application Bulkhead	Size (mm) (W x H x D) Min.	Size (mm) (W x H x D) Max.	Minimum filling rate (%)	Maximum filling rate (%)	Coaming position in bulkhead	Cables-Maximum Diameter (mm)	
Oval	60x40x140	800x400x140	0,24	36	symmetrically	60,5	
Round	32Øx140	219Øx140	0,2	36	symmetrically	42	

A-0 Deck penetration:

The coaming is welded symmetrically of the deck.

Installation details according drawing No. A0-2-J, A0-J01 to A0-J07 (of Fire Test Report FT18252)

Application Bulkhead	**Size (mm) (W x H x D) Min.**	**Size (mm) (W x H x D) Max.**	**Minimum filling rate (%)**	**Maximum filling rate (%)**	**Coaming position in bulkhead**	**Cables-Maximum Diameter (mm)**
Oval	60x40x140	600x400x140	0,34	36	symmetrically	60,5
Round	32Øx140	219Øx140	0,2	36	symmetrically	42

A-60 Deck penetration:

The coaming is welded symmetrically of the deck.

Installation details according drawing No. A60-2-J, A60-J01 to A60-J07 (of Fire Test Report FT18250)

Application Bulkhead	Size (mm) (W x H x D) Min.	Size (mm) (W x H x D) Max.	Minimum filling rate (%)	Maximum filling rate (%)	Coaming position in bulkhead	Cables-Maximum Diameter (mm)
Oval	60x40x140	800x400x140	0,24	36	symmetrically	60,5
Round	32Øx140	219Øx140	0,2	36	symmetrically	42

Application/Limitation

Approved for use as a cable penetration system in class A-0 and A-60 steel bulkheads and decks. Other applications are subject to case-by-case approval. Approved for use in class A-15 and A-30 when the penetration system is insulated as A-60. In addition the division is to be insulated with A-60 insulation at least 200 mm around the penetration.

No more than 36% of the inside cross sectional area of each transit should be occupied by cables.

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

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

Type Examination documentation

Test Reports A-0 and A60 Fire Class: FEFTC No. FT18250, FT18251, FT18252, FT18312,

Installation drawings No.:

A0-2-C, A0-C01 to A0-C07 (of Fire Test Report FT18251)
A60-2-C, A60-C01 to A60-C07 (of Fire Test Report FT18312)
A0-2-J, A0-J01 to A0-J07 (of Fire Test Report FT18252)
A60-2-J, A60-J01 to A60-J07 (of Fire Test Report FT18250)

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 air tightness up to a design pressure of 0.067 MPa (0.67 bar), test pressure - 0.1 MPa (1bar)

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

Type Approval documentation

Pressure tests: Documents no. TR-20181009001 to TR-20181009009 dated 2018-10-09

Tests carried out

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

END OF CERTIFICATE