DNV·GL

Certificate No:
MEDB00002R4

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED), issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Authority. This Certificate is issued by DNV GL AS under the authority of the Government of the Kingdom of Norway.

This is to certify:

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

with type designation(s)
DGM-NG type cable transits series

Issued to
Zhuji Jinqiao Industrial Co., Ltd.
Zhuji ZHEJIANG, China

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2017/306,**
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 **2022-07-11**.

Issued at **Høvik** on **2017-07-12**

DNV GL local station:
Ningbo

Approval Engineer:
Ginevra Giustiniani

Notified Body
No.: **0575**

for **DNV GL AS**

Vidar Dolonen
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 United States of America and the EEA EFTA states on the mutual recognition of Certificates of Conformity for Marine Equipment" signed 17 October 2005.

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 AS 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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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.

NORWEGIAN ACCREDITATION PROD 019

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Product description

"DGM-NG type cable transits series"
Consisting of either circular or rectangular 140 mm long steel sleeve with thickness of at least 3 mm symmetrically welded into the bulkhead/deck. The steel sleeve is filled between the cables with type "NG" fire-resistant sleeves of 100 mm long and dammed at both ends with 20 mm deep type "DGM" fire resistant sealing putty.

For further details, see test reports listed under Type Examination documentation below.

Application/Limitation

Approved for use as a cable penetration system in A-0/A-60 class steel bulkheads and decks (ref. tables below). Other applications are subject to case-by-case approval.

Table 1. Tested and approved arrangements in A-0 class steel bulkheads and decks.

Frame Type	Frame size, mm	Cable filling ratio, %	Sleeve position	Insulation arrangement
Circular	Diam. 34	24.5	General application (fire against either side)	Penetration may be installed in A-0 class steel bulkheads and decks without insulation
	Diam. 168	27		
	Diam. 406	49.9		
Rectangular	65 x 65	40.4		
	880 x 330	43		

Table 2. Tested and approved arrangements in A-60 class steel bulkheads and decks*.

Frame Type	Frame size, mm	Cable filling ratio, %	Sleeve position	Insulation arrangement
Circular	Diam. 27	18	General application (fire against either side)	Around the sleeve with 20 mm thick TG type ceramic wool produced by Zhejiang Pusen New Material Technology Co. Ltd. with density of at least 170 kg/m^3 or other approved A-60 class insulation
	Diam. 34	24.5		
	Diam. 168	27		
	Diam. 406	49.9		
Rectangular	65 x 65	40.4		
	986 x 400	45		

*) Approved for use in class A-15 and A-30 when the penetration system is insulated with 20 mm thick TG type ceramic wool produced by Zhejiang Pusen New Material Technology Co. Ltd. with density of at least 170 kg/m^3 or other approved A-60 class insulation. In addition the division is to be insulated with A-60 insulation at least 200 mm around the penetration.

Minimum distance between cables and between cables and coaming is 2 mm.

Maximum cable diameter: 110 mm.

The insulation material used has to be approved according to the Marine Equipment Directive and bear the Mark of Conformity.

The penetration system shall not be used for penetrating boundaries of tanks.

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

Type Examination documentation

Test report No. FT16271 (bulkhead) dated 15 July 2016 from FEFTC, Shanghai, China.
Test report No. FT16272 (deck) dated 13 July 2016 from FEFTC, Shanghai, China.

Tests carried out

Tested in accordance with IMO 2010 FTP Code Part 3.

Marking of product

The product or packing is to be marked with name and address of manufacturer, type designation, fire-technical rating, MED Mark of Conformity and USCG approval number if applicable (see page 1).

Appendix

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

Product description

"DGM-NG type cable transits series"
Consisting of either circular or rectangular 140 mm long steel sleeve with thickness of at least 3 mm symmetrically welded into the bulkhead/deck. The steel sleeve is filled between the cables with type "NG" fire-resistant sleeves of 100 mm long and dammed at both ends with 20 mm deep type "DGM" fire resistant sealing putty.

For further details, see Test report No. FT16271 and Test report No. FT16272.

Application/Limitation

This certificate covers only watertightness/gastightness for the same penetration types and sizes as the one being fire tested (see table 1 and 2 on page 2).

Approved for penetration in steel bulkheads or steel decks limited to a pressure of 4.4 bar watertightness (6.6 bar – tested pressure).

Approved for penetration in steel bulkheads or steel decks limited to a pressure of 4 bar gastightness (6 bar – tested pressure).

The cable penetrations are not approved for use in watertight bulkheads on passenger ships and Special Purpose Ships (SPS).

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

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

Type Approval documentation

Watertight/Airtight test report No. ZJJQ2016072801 dated 28 July 2016 from the manufacturer.

Tests carried out

Pressure tested according to Class Programme DNVGL-CP-0165, Sec. 2, Ch. 4, Edition February 2016.