



Marine & Offshore

Certificate number: 52326/A0 BV

File number: ACI 4000/032/012

Product code: 5302H

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

ROXTEC International AB

KARLSKRONA - SWEDEN

for the type of product

CABLE PENETRATIONS IN FIRE DIVISIONS

GK MC FC Single- and Multiple Cable Penetration System (steel)

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships Part C Chapter 4

SOLAS 74 Convention, as amended, Regulations II-2/9.3.1

IMO Res MSC.307(88) (2010 FTP Code)

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 20 Jul 2023

For Bureau Veritas Marine & Offshore,

At BV GOTHENBURG, on 20 Jul 2018,

Magne MOLLER



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

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BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION :

GK Multi-Cable Fire Collars (GK MC FC) Single- and Multiple Cable Penetration System (steel)

Consisting of circular or oval sleeve(s) with or without flange, one side circumferentially welded to a steel division. Sizes GK MC FC ROUND 89 to 244 (circular) and GK MC FC OVAL 200x150 to 550x170 (oval). The GK MC FC cable penetration system is filled with intumescent material and a glass fiber tissue hose, folded back on each side of the sleeves. The glass fiber tissue hose and the cable bundle are secured with a plastic covered metal strap on each side. On both sides of the cable transit, the cable bundle is secured with a cold smoke stop.

GK MC FC ROUND:

The coaming is welded symmetrically of the deck/bulkhead.
Insulation details according drawing Roxtec No. S1529242 rev A
Approved for cable outer diameter up to 41,5 mm
Filling ratios to be up to 77% for Deck and Bulkhead

GK MC FC OVAL:

The coaming is welded symmetrically of the deck/bulkhead.
Insulation details according drawings Roxtec No. S1529241 rev A & S1529242 rev A
Approved for cable outer diameter up to 41,5 mm
Filling ratios to be up to 67% for Bulkhead
Filling ratios to be up to 67% or 68%, depending on the configuration for Deck

2. DOCUMENTS AND DRAWINGS :

As per Manufacturer's drawings No. S1529241 rev A, dated June 1, 2018 & S1519242 rev A, dated June 1, 2018.

3. TEST REPORTS :

- Test report N° DMT-DO-53-056, dated 2016-08-01 as per IMO Resolution MSC.307(88), from DMT, Germany.
- Test report N° DMT-DO-53-060, dated 2016-11-17 as per IMO Resolution MSC.307(88), from DMT, Germany.
- Test report N° DMT-DO-53-064, dated 2016-11-21 as per IMO Resolution MSC.307(88), from DMT, Germany.
- Test report N° DMT-DO-53-065, dated 2017-01-19 as per IMO Resolution MSC.307(88), from DMT, Germany.

4. APPLICATION / LIMITATION :

- 4.1 - The fitting aboard to be the same as used for the test.
- 4.2 - The cables filling ratios of the penetrations are to be up to the values indicated in insulation drawings in §2.
- 4.3 - Approved for use as cable transits in A-0, A-15, A-30 and A-60 class steel divisions, with limitations contained in §1.
- 4.4 - The insulation material shall be type approved. The fire tests were conducted with various types of insulation materials; alternative ones (duly type approved) may be used provided their insulation performance are equivalent/appropriate.

5. PRODUCTION SURVEY REQUIREMENTS :

- 5.1 - The GK Multi-Cable Fire Collars (GK MC FC) are to be supplied by **ROXTEC International AB** in compliance with the type described in this certificate.
- 5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV product certificate.
- 5.3 - **ROXTEC International AB** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.

For information concerning the production phase modules, **ROXTEC International AB** has declared the following manufacturing site(s):

ROXTEC International AB
BOX 540
371 23 KARLSKRONA
SWEDEN

6. MARKING OF PRODUCT :

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

7. OTHERS :

It is **ROXTEC International AB's** responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

***** END OF CERTIFICATE *****