



Marine & Offshore

Certificate number: 61826/A0 BV

File number: ACI4000/032/013

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
Roxtec GK Firestop Sealing Kit (GK FS SK) in steel divisions

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships Part C Chapter 4
SOLAS 74, as amended, SOLAS 2000 Regulations II-2/9.3.1
IMO Resolution MSC.307(88) -(FTP Code 2010)-

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: 12 Apr 2026

For Bureau Veritas Marine & Offshore,
At BV GOTHENBURG, on 12 Apr 2021,
Torbjorn Ygesjo



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.

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

Roxtec GK Firestop Sealing Kit (GK FS SK) in steel divisions

Roxtec "GK Firestop Sealing kit" consists of a fibreglass cloth with built-in heat activated intumescent material to be wrapped around cable bundles and fitted into circular or oblong (noted "oval") steel sleeves. Folded back on each side with ends sealed off to create a cold smoketight seal and secured by metal cable ties. It is also intended to be used for bundled cables or as a blank fire stop solution. The installation shall be made in symmetrically welded or bolted sleeves (coaming). Sleeves are 105-205 mm long (52.5-102.5 mm from each side of steel division).

1-1 - A-60 Class in steel bulkhead:

Type	Size (mm)	Insulation on <u>unexposed</u> side	Filling ratio
GK MC FC ROUND KIT	89	2 layers of 45 mm thick mineral wool*, 150 mm around the sleeve	0%
	273		0%
	89	2 layers of 45 mm thick mineral wool* 150 mm around the sleeve and min. wrap 300 mm covering totally the GK MC FC cloth	70%
	273		69%
GK MC FC OVAL KIT	2x168	2 layers of 45 mm thick mineral wool* 150 mm around the sleeve	0%
	2x(250x170)		0%
	2x(250x170)	2 layers of 45 mm thick mineral wool* 150 mm around the sleeve and min. wrap 300 mm covering totally the GK MC FC cloth	67%
	200x150		67%

(*) see §4.3

1-2 - A-60 Class in steel deck:

Type	Size (mm)	Insulation on <u>exposed</u> side	Filling ratio
GK MC FC ROUND KIT	89	one layer of 45 mm thick mineral wool* 100 mm around the sleeve	0%
	273		0%
	89	one layer of 45 mm thick mineral wool* 100 mm around the sleeve and min. wrap 300 mm covering totally the GK MC FC cloth	69%
	273		69%
GK MC FC OVAL KIT	2x168	one layer of 45 mm thick mineral wool* 100 mm around the sleeve	0%
	2x(250x170)		0%
	200x150		0%
	2x168	one layer of 45 mm thick mineral wool* 100 mm around the sleeve and one layer covering totally the GK MC FC cloth	68%
	2x(250x170)		68%
	200x150		70%

(*) see §4.3

1.3 - A-0 Class in steel bulkhead:

Type	Size (mm)	Filling ratio
GK MC FC ROUND KIT	89	0%
	273	0%
	89	67%
	273	68%
GK MC FC OVAL KIT	200x150	0%
	2x(250x170)	0%
	200x150	70%
	2x(250x170)	67%

1.4 - A-0 Class in steel deck:

Type	Size (mm)	Filling ratio
GK MC FC ROUND KIT	89	0%
	273	0%
	89	70%
	273	68%
GK MC FC OVAL KIT	2x168	0%
	200x150	0%
	2x(250x170)	0%
	200x150	67%

2. DOCUMENTS AND DRAWINGS:

As per the Manufacturer's drawings:

- N° S1554857 rev.A dated 27/04/2020: "GK FS SK WITH CABLES - A-60 CLASS STEEL BULKHEAD"
- N° S1554858 rev.A dated 27/04/2020: "GK FS SK WITH CABLES - A-0 CLASS STEEL BULKHEAD"
- N° S1554853 rev.A dated 27/04/2020: "GK FS SK WITH CABLES - A-60 CLASS STEEL DECK"
- N° S1554856 rev.A dated 27/04/2020: "GK FS SK WITH CABLES - A-0 CLASS STEEL DECK"

3. TEST REPORTS:

Test reports, as per IMO 2010 FTP Code Annex 1 Part 3, from (a)CTO Poland, (b)DBI Denmark, (c)RISE Sweden or (d)DMT Germany:

Type	Size (mm)	Fire rating	Filling ratio	A-Class steel bulkhead Test report N°	A-Class Steel deck Test report N°
GK MC FC ROUND KIT	89	A-60	0% Max	RS-19/B-255/E dated 20/08/2019(a)	RS-19/B-225/E dated 20/08/2019(a)
		A-0	0% Max	RS-19/B-423/E dated 19/11/2019(a) PGA11387 A dated 05/07/2019(b)	8P07092 dated 27/09/2019(c)
	273	A-60	0% Max	RS-19/B-255/E dated 20/08/2019(a)	RS-19/B-256/E dated 20/08/2019(a) RS-19/B-225/E dated 20/08/2019(a)
		A-0	0% Max	RS-20/B-081/E dated 31/03/2020(a) PGA11387 A dated 05/07/2019(b)	PGA11610A dated 10/01/2020(b)
GK MC FC OVAL KIT	2x168	A-60	0% Max	RS-19/B-255/E dated 20/08/2019(a) /	RS-19/B-225/E dated 20/08/2019(a) /
		A-0	0% Max	/	8P07092 dated 27/09/2019(c) /
	2x(250x170)	A-60	0% Max	RS-19/B-255/E dated 20/08/2019(a) RS-19/B-355/E dated 16/10/2019(a)	RS-19/B-225/E dated 20/08/2019(a) /
		A-0	0% Max	RS-19/B-423/E dated 19/11/2019(a) PGA11387 A dated 05/07/2019(b)	8P07092 dated 27/09/2019(c) /
	200x150	A-60	0% Max	/	/
		A-0	0% Max	DMT-DO-53112 dated 22/05/2019(d) 8P07094 dated 23/09/2019(c)	RS-19/B-225/E dated 20/08/2019(a) 8P07092 dated 27/09/2019(c)

4. APPLICATION / LIMITATION:

4.1 - Approved for use:

- in A-15, A-30, A-60 class steel divisions with fire insulation as described in §1.
- in A-0 class steel divisions without fire insulation.

4.2 - Any other arrangement of cable transit is subject to a case-by-case approval.

4.3 - The tests have been carried out with fire insulating material "SeaRox WM 620" (nominal density 90 kg/m³; manufactured by Rockwool International A/S); any alternative A-class insulation material, previously proven and approved, giving at least an equivalent insulation performance, can be used.

4.4 - Filling ratio not to exceed the one tested (see § 1).

5. PRODUCTION SURVEY REQUIREMENTS:

5.1 - **Roxtec GK Firestop Sealing Kit (GK FS SK) in steel divisions** is 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.

6. MARKING OF PRODUCT:

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

7. OTHERS:

7.1 - 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.

7.2 - In-house type testing for cold smoke tightness as per test reports N° 22032017-01 dated 22/03/2017 (one cable bundle, filling ratio 21%; test pressure 0.3 mbar during 15 minutes) and 14122016-01 dated 14/12/2016 (three cable bundles; test pressure 0.3 mbar during 20 minutes).

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