



Confirmation of Product Type Approval

Please refer to the "Service Restrictions" shown below to determine if Unit Certification is required for this product. This certificate reflects the information on the product in the ABS Records as of the date and time the certificate is printed.

Pursuant to the Rules of the American Bureau of Shipping (ABS), the manufacturer of the below listed product held a valid Manufacturing Assessment (MA) with expiration date of 14-MAY-2023. The continued validity of the Manufacturing Assessment is dependent on completion of satisfactory audits as required by the ABS Rules.

And; a Product Design Assessment (PDA) valid until subject to continued compliance with the Rules or standards used in the evaluation of the product.

The above entitle the product to be called Product Type Approved.

The Product Design Assessment is valid for products intended for use on ABS classed vessels, MODUs or facilities which are in existence or under contract for construction on the date of the ABS Rules used to evaluate the Product.

ABS makes no representations regarding Type Approval of the Product for use on vessels, MODUs or facilities built after the date of the ABS Rules used for this evaluation.

Due to wide variety of specifications used in the products ABS has evaluated for Type Approval, it is part of our contract that; whether the standard is an ABS Rule or a non-ABS Rule, the Client has full responsibility for continued compliance with the standard.

Product Name: Cable, Deck and Bulkhead Penetration Sealings
Model Name(s): GK MC FC

Presented to:
ROXTEC INTERNATIONAL AB
ROMBVAGEN 2
SE 371 65
Sweden

Intended Service: Cable penetration system using intumescent material filling for use in A-Class steel bulkheads and decks in Marine and Offshore Installations.

Description: 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 245 (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 Coaming Type - Round - Steel 1. 89 mm dia x 205 mm (GKMC FC 89 FL sleeve) cable penetration with cables up to 16.5 mm outer diameter, tested maximum fill ratio 77% 2. 245 mm dia x 205 mm (GK MC FC 244 FL sleeve) cable penetration with cables up to 41.5 mm outer diameter, tested maximum fill ratio 68%. GK MC FC OVAL Coaming Type- Oval - Steel 1. 200 x 150 x 205 mm (GKMC FC 200x 150 sleeve) cable penetration with cables up to 29.5 mm outer diameter, tested maximum fill ratio 67% 2. 2 x (170 x 250) x 205 mm (GK MC FC 550x170 sleeve) cable penetration with cables up to 41.5 mm outer diameter, tested maximum fill ratio 68%.

Tier: 3

Ratings:	Fire: A0, A15, A30 and A60 Bulkheads and Decks Water & Gas Tightness: Not Tested.		
Service Restrictions:	1. The penetration system is not designed or tested for applications where water tightness or gas tightness is required. Accordingly, product should not be installed in bulkheads and decks if water- and gas- tightness is a requirement. 2. Maximum Cable diameter allowed is 41.5 mm. 3. Maximum allowed fill ratio is 67%.. 4. Minimum Pipe Annulus gap as per drawings S1528680 Rev A & S1528822 Rev A. 5. Tested with Marine Power/ Instrumentation/Control Cables. 4.. Insulation and penetration arrangements to be as per ABS approved drawings. 5. Not for use in tank boundaries. 6. For fire class A-0, A-15 and A-30, sleeves are to be insulated as for class A-60 and in addition the division is to be insulated at least 200 mm around the penetration. 7. Maximum ambient service temperature for sealant is +70 degree C. 8. Unit Certification is not required for this product. If the manufacturer or purchaser's request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.		
Comments:	a) All seal type should be installed in accordance with the manufacturers instructions in accordance with ABS approved installation drawings. b) Insulation material is to be A60 approved type and properly installed in accordance with ABS approved drawings to the satisfaction of the Surveyors c) Fire rated bulkheads or decks for cable penetrations are to be examined as per ABS Steel Vessels Rules 4-8-4/29.15. d) The product or packing is to be marked with name of manufacturer, type designation and fire rating. e) The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.		
Notes / Documentation:	Test Reports DMT GmbH & Co.KG, Fire test report Number DMT-DO-53-056, Dated 01 August 2016 DMT GmbH & Co.KG, Fire test report Number DMT-DO-53-060, Dated 17 November 2016 DMT GmbH & Co.KG, Fire test report Number DMT-DO-53-064, Dated 21 November 2016 DMT GmbH & Co.KG, Fire test report Number DMT-DO-53-065, Dated 19 January 2017 Drawings Drawing No. S1526887, GK MC FC Cable Insulation A-60 Class Steel Deck & Bulkhead- Certificate drawing, Revision: A Drawing No. S1526901, GK MC FC Cable Insulation A-60 Class Steel Deck & Bulkhead- Certificate drawing, Revision: A Drawing No. S1528680 GK MC FC Sleeve Round 89-244 FL- Information Drawing , Revision: A Drawing No. S1528822 GK MC FC Sleeve Oval 200x 150 to 550 x 170 FL- Information Drawing, Revision: A Miscellaneous Drawing No. 183296 DOC-001835 A, Installation instruction, Revision: B		
Term of Validity:	This Product Design Assessment (PDA) Certificate 18-LD1721319-PDA, dated 15/May/2018 remains valid until 14/May/2023 or until the Rules or specifications used in the assessment are revised (whichever occurs first). This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product. Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA. Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the manufacturer and intended client.		
ABS Rules:	2018 ABS Steel Vessel Rules 1-1-4/7.7, 1-1-A3, 1-1-A4, 4-8-4/21.13 & 4-8-4/29.15. 2018 Mobile Offshore Drilling Units Rules 1-1-4/9.7, 1-1-A2, 1-1-A3,		
National Standards:			
International Standards:	Regulation II-2/ 9.3.1 of SOLAS (2014 consolidated edition); IMO Resolution MSC.307(88) - (2010 FTP Code), Annex I: Part 3, adopted 3 December 2010		
Government Authority:			
EUMED:			
Others:			
Model Certificate	Model Certificate No	Issue Date	Expiry Date
PDA	18-LD1721319-PDA	16-MAY-2018	14-MAY-2023



ABS Programs

ABS has used due diligence in the preparation of this certificate and it represents the information on the product in the ABS Records as of the date and time the certificate was printed. Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. Limited circumstances may allow only Prototype Testing to satisfy Type Approval. The approvals of Drawings and Products remain valid as long as the ABS Rule, to which they were assessed, remains valid. ABS cautions manufacturers to review and maintain compliance with all other specifications to which the product may have been assessed. Further, unless it is specifically indicated in the description of the product; Type Approval does not necessarily waive witnessed inspection or survey procedures (where otherwise required) for products to be used in a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS. Questions regarding the validity of ABS Rules or the need for supplemental testing or inspection of such products should, in all cases, be addressed to ABS.