



NIPPON KAIJI KYOKAI

Certificate

Certificate No.
TA18830E(R)

OF

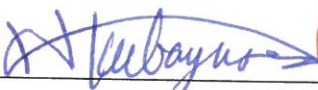
APPROVAL

Item	: A-60 class cable penetration
Product name	: Roxtec Sealing System with Multidiameter™ Technology (cable)
Specifications	: See Annex.
Applicant	: Roxtec International AB Box540, S-371 23 Karlskrona, Sweden
Manufacturer	: The same as the Applicant.
Testing standards	: IMO FTP Code Annex1 / Part 3 2010 FTP Code Annex1 / Part 3
Test reports	: See Annex.
Limitations	: See Annex.

THIS IS TO CERTIFY that the above type of product has been approved by Nippon Kaiji Kyokai with type approval No. 08FPA1DA, and that the products of the above type will be accepted for use onboard ships classed with the Society as complying with the relevant requirements of the Society's *Rules for the Survey and Construction of Steel Ships* and those of the *International Convention for the Safety of Life at Sea, 1974, as amended*, subject to conditional upon the manufacturer having a quality control system audited by a competent authority to ensure continuous compliance with the type approval conditions.

This certificate is valid from 3 March 2018 until 2 March 2023.
Issued at Tokyo on 3 August 2018.

NIPPON KAIJI KYOKAI


H. Kobayashi
General Manager

Material and Equipment Depart

NOTE: The design, construction and way of installation subject to attachments. Any significant changes to the product without our approval will result in this certificate becoming null and void.

Test Reports

Test laboratory	Report number	Date of issue
Norwegian Fire Research Laboratory (N-7465 Trondheim, Norway)	103070.29 A	28 October 2003
	103070.29 B	28 October 2003
Swedish National Testing and Research Institute (SP Box 857 SE-501 15 Boras, Sweden)	P402000	17 September 2004
	P605253	09 February 2007
	P701755	12 June 2007
SP Technical Research Institute of Sweden (SP Box 857 SE-501 15 Boras, Sweden)	4P06068	17 January 2015
	6P02249	17 August 2016
	6P02516	29 August 2016
	6P10022	7 March 2017
	6P10024	7 March 2017
RISE Research Institutes of Sweden AB (SP Box 857 SE-501 15 Boras, Sweden)	7P02167	7 August 2017
DBI-Danish Institute of Fire and Security Technology (Jernholmen 12 2650 Hvidovre, Copenhagen Denmark)	PGA10651	3 July 2015
	PGA10652	3 July 2015
	PGA10723A	4 February 2016
	PGA10800A	26 May 2016
	PGA10871Arev.1	9 December 2016
CENTRUM TECHNIKI OKRETOWEJ S.A. (65 Szczecińska 80-392 Gdańsk Poland)	PGA10870A	13 December 2016
	RS-17/B-176/E	25 May 2017
	RS-17/B-177/E	26 May 2017
	RS-17/B-396/E	31 October 2017

Limitations

1. In case that A-60 class pipe penetration is used as A-15/A-30 class cable penetration, such penetration is to be applied to the specification for A-60 class cable penetration described in the attached drawing.
2. In case that A-60 class pipe penetration is used as A-0 penetration, such penetration is to be insulated on an exposed side (on the cable transits itself and 200mm around).
3. The cables must not touch coaming.
4. The use of ajiro type cables are also approved and accepted.



Specifications

Frame Type	Frame Size	Approved Direction (Vertical /Horizontal)	Filling ratio for Cable	Insulation Drawings
S-Series Frames	1-8 and Combination (Max. S8+8x7)	(Vertical /Horizontal)	No more than 40%	A60/ S1006194 A60/ S1006193
R-Series Frames	70-200	(Vertical /Horizontal)	No more than 40%	A60/ S1012919
RS/RS OMD Seals with SLRS Sleeve	43-125	(Vertical)	No more than 40%	A60/ S1012727
RS/RS OMD Seals with SLRS Sleeve	23-150	(Horizontal)	No more than 40%	A60/S1012727
R-Series frame with SLA Sleeve.	SLA 50/ R 50	(Horizontal)	43% to 66% Cable OD=10mm x4. Cable OD=50mm x1.	A60/S1529529 A0/ S1529530
R-Series frame with SLA Sleeve.	SLA 50/ R50	(Horizontal)	38% Cable OD=10mm x3.	A60/S1529529 A0/ S1529530
R-Series frame with SLA Sleeve.	SLA 75/ R75	(Horizontal)	38% Cable OD=32mm x1.	A60/S1529529 A0/ S1529530
R-Series frame with SLA Sleeve.	SLA 100/ R100	(Horizontal)	69% Cable OD=10mm x8.	A60/S1529529 A0/ S1529530
R-Series frame with SLA Sleeve.	SLA 50/ R50	(Vertical)	33% Cable OD=10mm x2.	A60/S1529529 A0/ S1529530
R-Series frame with SLA Sleeve.	SLA 100/ R100	(Vertical)	44% Cable OD=50mm x1.	A60/S1529529 A0/ S1529530
RS Seals with SLA Sleeve.	SLA 25/ RS25	(Horizontal)	20% Cable OD=10mm x1.	A60/S1529526 A0/ S1529527
RS Seals with SLA Sleeve.	SLA 75/ RS75	(Horizontal)	37% Cable OD=32mm x1.	A60/S1529526 A0/ S1529527
RS Seals with SLA Sleeve.	SLA 25/ RS25	(Vertical)	20% Cable OD=10mm x1.	A60/S1529526 A0/ S1529527
RS Seals with SLA Sleeve.	SLA 75/ RS75	(Vertical)	37% Cable OD=32mm x1.	A60/S1529526 A0/ S1529527

* Cable filling ratio is calculated as follows.

Cable filling ratio = (The sum of cross sectional of the cables) ÷ (the inside cross-sectional area of coaming)

- Cross sectional of the cable = $R^2 \times 3.14$
- R^2 = Radius of Cable and the Seal.