



Lloyd's
Register

Type Approval Certificate

This is to certify that the undernoted product has been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

This certificate is issued to:

PRODUCER CRISM PTY LTD
18 MURRIE ST WINDANG 2528 NSW
AUSTRALIA

PLACE OF PRODUCTION Ningbo Yinzhou Leisheng Machinery Co., Ltd
Shenfengshui Village, Jangshan Town, Yinzhou District,
Ningbo
China

DESCRIPTION Slip-on joints, Slip Type

TYPE CRISM slip type joint Fitting

APPLICATION Marine, Offshore LR Class II and Class III pipeline as below indicated;

	Applied Systems	Notes
	Flammable fluids (Flash point $\leq 60^{\circ}\text{C}$)	
1	Cargo oil lines	
2	crude oil washing lines	
3	vent lines	
	Inert gas	
4	water seal effluent lines	
5	scrubber effluent lines	
6	main lines	* 1)
7	distributions lines	
	Flammable fluid (Flash point $\geq 60^{\circ}\text{C}$)	
8	cargo oil lines	
9	fuel oil lines	* 1)
10	lubricating oil lines	* 1)
11	hydraulic oil	* 1)
12	thermal oil	* 1)

Certificate No. 18/ 00070

Issue Date 16 October 2018

Expiry Date 15 October 2023

Sheet 1 of 4



M.H.M.Rila
Southampton Technical Support Office
Marine & Offshore Lloyd's Register

Lloyd's Register EMEA
71 Fenchurch Street, London EC3M 4BS

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	Sea water	
13	bilge lines	
14	fire main and water spray	
15	foam system	
16	sprinkler system	
17	ballast system	
18	cooling water system	
19	tank cleaning services	
20	non-essential system	
	Fresh water	
21	cooling water system	
22	condensate return	
23	non-essential system	
	Sanitary / Drains/Scuppers	
24	deck drains(internal)	*2)
25	sanitary drains	
	Sounding /Vent	
27	water tanks/ dray spaces	
28	oil tanks (Flash point>60°C)	*1)
	Miscellaneous	
29	service air (non-essential)	
30	brine	
31	steam	*3)

Notes:

- 1) Not inside machinery spaces of category A or accommodation spaces. May be accepted in other machinery spaces provided the joints are located in easily visible and accessible positions.
- 2) Only above bulkhead deck of passenger ships and freeboard deck of cargo ships.
- 3) They are restrained on the pipes, may be used for steam pipes with a design pressure of 10 bar or less on the weather decks of oil and chemical tankers to accommodate axial pipe movement.

SPECIFIED STANDARD

LR Rules and Regulations for the Classification of Ships, July 2018.
IACSUR P2 "Rules for piping design, construction and testing" (Rev.4 2016)

Certificate No. 18/ 00070
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Sheet 2 of 4



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PERFORMANCE TEST

Representative samples of joints have been tested in accordance with the requirements as specified in IACSUR P2.11 (Rev.4, 2016). The following tests have been carried out:-

- 1) Tightness test
- 2) Burst pressure test
- 3) Fire endurance test
- 4) Vacuum test

RATINGS

Dimension (mm)	DN20 to DN150
Max. Working Pressure (bar)	PN40
Design Temperature	Depending on the O-Ring Seal Material
Body	Stainless Steel (AISI 316)
CRISM Grips	EN 36 Case Hardening Steel
Seal Materials	Nitrile, Viton, EPDM, Neoprene, Silicone, FFKM
O-Ring Seal Material	Temperature range (°C)
Nitrile	-10 to +100
Viton	-15 to +180
EPDM	-20 to +95
Neoprene	-25 to +80
Silicone	-50 to +160
FFKM	-10 to +260

MATERIAL

Certificate No. 18/ 00070
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Expiry Date 15 October 2023
Sheet 3 of 4


 Rila Mohamed
 Southampton GFC Office
 Lloyd's Register EMEA
LR631.1.2016.06



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OTHER CONDITIONS

1. Joint Fitting are to be selected, installed and tested in accordance with the manufacturer's recommendations and Lloyd's Register's Rules and Regulations for the Classification of Ships, Part 5, Chapter 12, Section 2.12, Table 12.2.7.
2. Stainless steel fittings are not recommended for salt-water services in polluted waters or where stagnant conditions exist as they are prone to pitting, in all cases the materials are to be suitable for their intended service conditions.
3. Generally, slip-on joints are not to be used in pipelines in cargo holds, tanks, and other spaces which are not easily accessible.
4. Each slip-on joint is to be tested at the manufacturer's production facility to a hydrostatic pressure not less than 1.5 times the rated pressure.
5. Slip-on joints may not be used in Class 1 piping system and the fuel supply line of the injection pumps and spill system.
6. The joint Fitting are to be marked with the following information:
 - Manufacturer's name or trademark.
 - Pressure rating
 - Temperature range
 - Size

"This Certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid certificate."

The Design Appraisal Document No. 18/00070 and its supplementary Type Approval Terms and Conditions form part of this Certificate

Certificate No. 18/ 00070
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Sheet 4 of 4



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