



Marine & Offshore

Certificate number: 38058/C1 BV

File number: ACM 135/2734/02

Product code: 2170H

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

RACCORDERIE METALLICHE S.p.A.

CAMPITELLO DI MARCARIA MN - ITALY

for the type of product

MECHANICAL JOINTS - COMPRESSION COUPLINGS - PRESS TYPE
INOXPRES SYSTEM**Requirements:**

- BUREAU VERITAS Rules for the Classification of Steel Ships
- BUREAU VERITAS Rules for the Classification of Offshore Units
- BUREAU VERITAS Rules for the Classification of Yachts

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: 08 Apr 2029**For Bureau Veritas Marine & Offshore,**

At BV NAPOLI, on 20 Nov 2024,

Sandro BRUSEGAN

**This certificate was created electronically and is valid without
signature**



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 electronic version is available at: <http://www.veristarm.com/veristarnb/jsp/viewPublicPdfTypepec.jsp?id=set9pvqwkl>

BV Mod. Ad.E 530 June 2017

This certificate consists of 4 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION

INOXPRES System pipe couplings with O-ring seal

1.1 - Design

Stainless steel pipes used as pipes couplings. Fittings have at each end a toroidal groove with an O-ring seal, in synthetic rubber, which, deformed by a pressing tool, provides the tightness of the coupling.

INOXPRES Fittings with EPDM rings

Diameter (mm)	Tightness (mm)	PN (bar)*	T (°C)*	Application*
15	1	16	-20 / +120	When fire resistance is required
18	1			
22	1.2			
28	1.2			
35	1.5			
42	1.5			
54	1.5			
76.1	2			
88.9	2			
108	2			

*Depending on sealing material: properties of other seal material described in the material section

1.2 - Material

Model	Pipes and fittings	O-ring	Max. working pressure (bar)	Max. working temperature (°C)
EPDM*	AISI 316L (1.4404) EN10088	TIMO-70 EPDM black	16	-20/+120
NBR	AISI 316L (1.4404) EN10088	TEC N31-70 yellow	5	-20/+70
FKM	AISI 316L (1.4404) EN10088	FKM AL V70 green	16	-20/+220
VMQ*	AISI 316L (1.4404) EN10088	S2-70VMQ red silicone	16	-20/+180

*specific for fire resistance applications

When other choices of materials are used per manufacturer's recommendations, the BV agreement is to be obtained.

2. DOCUMENTS AND DRAWINGS

- Manufacturer's catalogue dated January 2024
- Technical specification for stainless steel pipe N°CQMP019-01 Rev.X dated 24/11/2023
- Technical specification for annealed stainless steel pipe N°CQMP019-02 Rev.G dated 24/06/2022
- Technical Data Sheet for FKM dated 27/04/1999
- Technical Data Sheet for VMQ dated 04/01/2010
- Technical Data Sheet for NBR dated 18/10/2005
- Technical Data Sheet for EPDM dated 04/09/2007

No departure from the above documents shall be made without the prior consent of the Society. The manufacturer must inform the Society of any modification or changes to these documents and drawings.

3. TEST REPORTS

- Qualification tests performed in PROTOTIPO laboratory: Pressure pulsation test and vibration test. Test report N°PRTP/20100301/AT Rev.01 dated 30/11/2010.
- Qualification tests performed in CETENA laboratory: Tightness test, Burst test, Pull-out test and vacuum test. Test report N°10906 dated 25/07/2013.
- Fire resistance test reports conducted by RINA Laboratory acc. to ISO 19921/19922 N° 2010CS012987/1-2-3 dated 30/07/2010 and N°2014CS01204/8 dated 05/02/2014. (conditions: 30 minutes wet for model VMQ)
- Fire resistance test reports conducted by RINA Laboratory acc. to ISO 19921/19922 N°2019CS014165/1 to /8 dated 18/12/2019. (conditions: 30 minutes dry for model EPDM)

4. APPLICATION / LIMITATION

4.1.1 - Model EPDM may be used for services of class III:

- **Flammable fluids (flash point $\leq 60^{\circ}\text{C}$)** - cargo oil, crude oil washing, vent lines
- **Inert gas** - water seal/scrubber effluent lines, main lines, distributions lines
- **Flammable fluids (flash point $> 60^{\circ}\text{C}$)** - cargo oil, fuel oil, lubricating oil, hydraulic oil, thermal oil lines
- **Sea water** – bilge lines, ballast system, cooling water, permanent water filled fire extinguishing systems, non-permanent water fire extinguishing systems, tank cleaning/non-essential systems
- **Fresh water** - cooling water, condensate return, non-essential systems
- **Sanitary/Drains/Scuppers** - Deck drains (internal) (1), sanitary drains, scuppers and discharge (overboard)
- **Sounding and venting** - water tanks/dry spaces, oil tanks (flash point $> 60^{\circ}\text{C}$)
- **Miscellaneous** - service air (non-essential), brine, steam, starting/control air, CO2 system outside protected place, CO2 system inside protected space

(1)- *Only above bulkhead deck of passenger ships and freeboard deck of cargo ships.*

4.1.2 - Model VMQ may be used for services of class III:

- **Flammable fluids (flash point $\leq 60^{\circ}\text{C}$)** - cargo oil (1), crude oil washing (1), vent lines (2)
- **Inert gas** - water seal/scrubber effluent lines, main lines (1), distributions lines (1)
- **Flammable fluids (flash point $> 60^{\circ}\text{C}$)** - cargo oil (1), fuel oil, lubricating oil, hydraulic oil, thermal oil lines
- **Sea water** – bilge lines (2), permanent water filled fire extinguishing systems, non-permanent water fire extinguishing systems (2), ballast system, cooling water, tank cleaning services, non-essential systems
- **Fresh water** - cooling water, condensate return, non-essential systems
- **Sanitary / Drains / Scuppers** – Deck drains (internal) (4), sanitary drains, scuppers and discharge (overboard)
- **Sounding / vent** - water tanks/dry spaces, oil tanks (flash point $> 60^{\circ}\text{C}$)
- **Miscellaneous** - service air (non-essential), brine, steam, starting/control air (3)

(1)- *Not to be used in pump rooms and open decks.*

(2)- *May be used only in cases where such mechanical joints are installed on exposed open decks, as defined in Ch 4, Sec5, [1.4.3] item b) 2) (10) and not used for fuel oil lines.*

(3)- *Not to be used inside machinery spaces of category A*

(4)- *Only above bulkhead deck of passenger ships and freeboard deck of cargo ships.*

4.1.3 - Model FKM and NBR may be used for services of class III:

- **Flammable fluids (flash point $\leq 60^{\circ}\text{C}$)** – cargo oil lines (1), crude oil washing lines (1), vent lines (2)
- **Inert gas** – main lines (1), distribution lines (1)
- **Flammable fluids (flash point $> 60^{\circ}\text{C}$)** – cargo oil (1), fuel oil (2), lubricating oil (2), hydraulic oil (2), thermal oil lines (2)
- **Sea water** – bilge/ballast/cooling water (3), tank cleaning, non-essential systems, permanent water filled fire extinguishing systems (2), non-permanent water filled fire extinguishing systems (2)
- **Fresh water** - cooling water (3), condensate return (3), non-essential systems
- **Sanitary/Drains/Scuppers** - sanitary drains, scuppers and discharge (overboard)
- **Sounding and venting** - water tanks/dry spaces, oil tanks (flash point $> 60^{\circ}\text{C}$) (2)
- **Miscellaneous** – starting/control air (3), service air (non-essential), brine, steam,

(1)- *Not to be used in pump rooms and open decks.*

(2)- *May be used only in cases where such mechanical joints are installed on open decks, as defined in Ch 4, Sec5, [1.4.3] item b) 2) (10) and not used for fuel oil lines.*

(3)- *Not to be used inside machinery spaces of category A.*

(4)- *Only above bulkhead deck of passenger ships and freeboard deck of cargo ships.*

4.2.2 - Model VMQ is not to be used for:

- **Miscellaneous** – CO2 system outside protected place, CO2 system inside protected space

4.2.3 - Model EPDM and NBR are not to be used for:

- **Inert gas** – water seal effluent, scrubber effluent lines

- **Miscellaneous** – CO2 Systems

4.3 - In all cases, the associated pipes are to be suitably supported and anchored. The joints are to be at any time accessible,

except inside tanks where permitted by the Bureau Veritas rules.

4.4 - Assembly instructions given by the manufacturer are to be complied with.

4.5 - The wall thickness and the material of the tubes are to be in accordance with the applicable Society Rules.

4.6 - The use of stainless steel is to be restricted as per the requirements of the Bureau Veritas Rules.

4.7 - The sealing/packing material is to be compatible with the fluid to be conveyed and the maximum working temperature.

4.8 - Tapered threaded end fittings are not to be used in engine rooms, nor in any place containing an ignition source unless otherwise suitably screened at the Society's Surveyor satisfaction.

5. PRODUCTION SURVEY REQUIREMENTS

5.1 - The products are to be supplied by **RACCORDERIE METALLICHE S.p.A.** 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.

5.3 - BV product certificate is not required.

5.3 - **RACCORDERIE METALLICHE S.p.A.** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.

5.4 - For information, **RACCORDERIE METALLICHE S.p.A.** has declared to Bureau Veritas the following production site:

RACCORDERIE METALLICHE S.p.A.
Strada Sabbionetana, 59
46010 CAMPITELLO DI MARCARIA MN, (MN)
ITALY

6. MARKING OF PRODUCT

Each coupling shall be clearly marked with at least:

- Manufacturer's name or logo
- Type designation
- Size

7. OTHERS

It is **RACCORDERIE METALLICHE S.p.A.**'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.

This certificate supersedes the Type Approval Certificate No. 38058/C0 BV issued by the Society.

*** END OF CERTIFICATE ***