



MARINE DIVISION

Certificate number: 10639/C0 BV

File number: ACM 135/0325/002

Product code: 2161H

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

ILTA INOX SpA
Robecco d'Oglio (CR) - ITALY

for the type of product

PIPE FITTINGS

CHIBRO Pressfitting system made of stainless steel

Requirements:

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

This certificate is issued to attest that BUREAU VERITAS 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: 11 Dec 2018

For BUREAU VERITAS,

At BV GENOA, on 11 Dec 2013,

Carlo Bozzetti



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. 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 Division 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 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

CHIBRO Pressfitting made of stainless steel

1.1 Design (compression couplings, press type)

- Press type fittings are made of stainless steel materials and have an O-ring rubber seal which provides the tightness of the fitting when deformed by a pressing tool.

1.2 Ratings

Outside Pipe Diameter (mm)	15	18	22	28	35	42	54	76.1	88.9	108
Pipe thickness (mm)	1	1	1.2	1.2	1.5	1.5	1.5	2	2	2
Penetration length A (mm)	20	21	22	24	27	32	38	55	64	78

Max. working pressure (MPa)	1,6
Working temperature range (°C)	-20 / 120
Max. temperature (peaks)	150

The maximum working pressure is not to exceed one quarter of the burst pressure at the service temperature.

1.3 Material specification

Tubes	Stainless steel AISI 316 L (1.4404 according to EN 10088)
Fittings	Stainless steel AISI 316 L (1.4404 according to EN 10088)
O-ring seal	EPDM / NBR

2. DOCUMENTS AND DRAWINGS

- Manufacturer catalogue
- Specifications and installation guidelines
- Supply programme

3. TEST REPORTS

3.1 Tests carried out in-house at Ilta Inox SpA's laboratory and witnessed by BUREAU VERITAS:

- Installation and leak test, pressure test, vacuum test, test with O-Rings burnt

3.2 Vibration test performed at CETENA's laboratory. Test report N° 7487.

3.3 Fire endurance test carried out according to ISO 19921:2005 and ISO 19922:2005 at RINA's laboratory and witnessed by BUREAU VERITAS. Test reports N° 2006CS013655/1 to /7 dated 03/10/2006.

4. APPLICATION / LIMITATION

4.1 May be used on board for services of class III piping systems:

- Potable and domestic hot and cold water, fresh water cooling water for main/auxiliary machinery, fresh water for wet type sprinkler systems (and dry systems with diameter up to 54 mm), hot and chilled water for air conditioning plants, condensate, compressed air for deck service and control systems, non-essential lines.

4.2 The packing material must be compatible with the fluid to be conveyed and the maximum working temperature.

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

4.4 In all cases, the associated pipes are to be suitably supported and anchored. The joints are to be at any time accessible, excepting inside tanks where permitted by the Society Rules.

4.5 MM and MF extended pipe penetrations with welding steel sleeve can be used as penetrations in watertight and A-Class fire divisions when mounted in accordance with the Society Rules applicable to the ships. The drawing examination is subject to the Society's approval in each case.

5. PRODUCTION SURVEY REQUIREMENTS

5.1 The products are to be manufactured, examined and tested by the manufacturer in accordance with the approved type described in this certificate and BUREAU VERITAS Rules and Regulations stated on the front page of this certificate.

5.2 Production sites are to be recognized by BUREAU VERITAS as per NR 320 for HBV products. To this end, the manufacturer has to make the necessary arrangements for a Society's Surveyor to perform visits and product audits at the production sites.

5.3 No BUREAU VERITAS certificate is required.

Place of production

Ilta Inox SpA
Unità produttiva Chibro
Via Valtellina, 15
22070 Montano Lucino (CO)
ITALY

6. MARKING OF PRODUCT

Each fitting is to be at least marked with:

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

7. OTHERS

This approval is given on the understanding that the manufacturer will accept full responsibility for informing shipbuilders or their sub-contractors of the proper method of fittings and general maintenance of the products and of the conditions of this approval.

This certificate supersedes the Type Approval Certificate N° 10639/B0 BV issued on 11/03/2008 by the Society.

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