



# TYPE APPROVAL CERTIFICATE

Certificate No:  
**TAP000014Y**  
Revision No:  
**2**

## This is to certify:

### That the Press fittings

with type designation(s)  
**NUMEPRESS**

Issued to

**ISOTUBI, S.L.**  
**Castellbisbal, Barcelona, Spain**

is found to comply with

**DNV rules for classification – Ships Pt.4 Ch.6 Piping systems**  
**DNV-OS-D101 – Marine and machinery systems and equipment, Edition July 2021**  
**DNV class programme DNV-CP-0185 – Type approval – Mechanical joints**

## Application :

**The pipe system with couplings are approved for use in non-class piping systems on board DNV classed vessels.**

**Temperature range:** 0°C to 120°C  
**Max. working press.:** 16 bar(g) for tube OD between 15mm and 88.9mm, 15 bar(g) for tube OD 108mm  
**Sizes:** Tube OD 15mm to 108mm (see page 2)

Issued at **Høvik** on **2023-04-12**

for **DNV**

This Certificate is valid until **2027-12-31** .

DNV local unit: **Barcelona FIS**

Approval Engineer: **Maheshraja Venkatesan**

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**Zeinab Sharifi**  
**Head of Section**

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Form code: TA 281

Revision: 2022-12

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Page 1 of 3

## Product description

### Stainless steel welded tubes (TIG welding) according to EN 10312

Austenitic stainless steel: 1.4301/1.4401/1.4404

Outside Diameter (mm)	15	18	22	28	35	42	54	76,1	88,9	108
Wall thickness (mm)	1	1	1.2	1.2	1.5	1.5	1.5	2	2	2

### Stainless steel welded tubes (TIG welding) according to EN 10217-7

Austenitic stainless steel: 1.4301/1.4401/1.4404

Outside Diameter (mm)	13.5	17.2	21.3	26.7	33.4	42.4	48.3	60.3
Wall thickness (mm)	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6

### Press fittings with o-ring seal

- Austenitic stainless steel: 1.4401/1.4404

O-ring: EPDM or FKM

Outside Diameter (mm)	15	18	22	28	35	42	54	76.1	88.9	108
Wall thickness (mm)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2	2	2

Outside Diameter (mm)	13.5	17.2	21.3	26.7	33.4	42.4	48.3	60.3
Wall thickness (mm)	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6

- Duplex Stainless steel: 1.4462

O-ring: EPDM or FKM

Outside Diameter (mm)	15	18	22	28	35	42	54
Wall thickness (mm)	1.5	1.5	1.5	1.5	1.5	1.5	1.5

### Coupling configurations:

Slip coupling, 90°Elbow, 90°Elbow one plain end, 45°Elbow, 45°Elbow one plain end, 90°Female angle adaptor, 90°Male angle adaptor, 90°Female elbow with wall plate, 90°Elbow with plain ends, Valve connector with a swivel nut, Female tee threaded adaptor, Male female reducer, Reducing tee, Equal tee, Female adaptor, Male adaptor, Flanged adapter, Pre-formed pipebridge, Plug, Air tube pipebridge, Pipebridge, Three pieces adaptor, Female pipebridge, Female connector, Male connector, Press flanged adapters, Flexible tube, Equal or reduced cross

## Application/Limitation

The pipe system with couplings are approved for use in non-class piping systems on board DNV classed vessels.

The piping system shall not penetrate enclosed spaces below the freeboard deck (e.g. watertight bulkheads or fire bulkheads). Pipe penetrations through watertight bulkheads, fire bulkheads or shell plating shall be approved in each separate case. When penetrating a watertight bulkhead there shall be remotely operated valves secured to each bulkhead. The valves and control system shall be located outside the damage zone of the ship.

The approval is only valid when the couplings are assembled with tubing of correct temper and tolerances as recommended by the manufacturer.

Materials chosen for the specific system shall be suitable for the intended medium and environmental conditions.

Pipe couplings made of austenitic stainless steel covered by this approval are not considered as seawater resistant material and shall not be used in direct contact with seawater.

The piping system with couplings shall be subjected to a hydraulic pressure test to 1.5 times maximum allowable working pressure after assembly on board.

Pipe couplings covered by this approval shall not be installed in systems subjected to simultaneous vibration and pressure pulsations.

The piping system shall not be subject to pressure below atmospheric or vacuum condition.

## Type Approval documentation

Manufacturer's catalogue 20147-January  
Burst pressure test witnessed by DNV surveyor dated 2009-12-02  
Pull-out test report number 24446.09 dated 2009-09-24  
Vibration and impulse test report carried out in May & July 2009  
ABS fire test reports HG2928221 on sizes DN 15, DN25 & DN54  
Renewal burst pressure test report – witnessed by DNV GL surveyor dated 2017-12-21  
Renewal burst pressure test report B22/12/3980 Issue 1 reviewed by DNV dated 29-12-2022

## Tests carried out

Burst, vibration, pressure pulsation, pull-out, fire test

## Marking of product

For identification to this type approval the products are to be marked with:

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

## Periodical assessment

For retention of the Type Approval, a DNV Surveyor shall perform periodical assessment after two years (+/- 90 days) and after 3.5 years (+/- 90 days) to verify that the conditions for the approval are complied with. Reference is made to DNV-CP-0338.