



DET NORSKE VERITAS

TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. P-13343
This Certificate consists of 4 pages

This is to certify that the
Pipe System with Couplings
with type designation(s)
NUMEPRESS

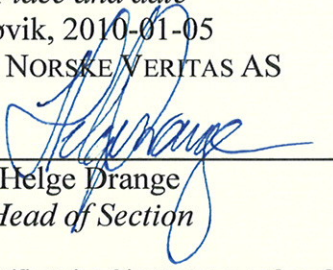
Manufactured by
ISOTUBI, S.L.
Sabadell, Spain

is found to comply with
Det Norske Veritas' Rules for Classification of Ships
Det Norske Veritas' Standards for Certification 2.9 No. 5-792.20

Application
May be used in the following systems, provided Class III: Sanitary, service air (non-essential), steam and condensate.

Temperature range:	0°C to 120°C
Max. pressure:	16 bar
Design:	Pipe system with presscouplings.

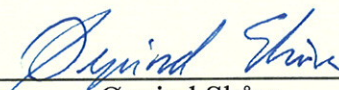
Place and date
Høvik, 2010-01-05
for DET NORSKE VERITAS AS


Helge Drange
Head of Section



Local Office
DNV Barcelona

This Certificate is valid until
2013-12-31


Øyvind Skåra
Surveyor

Notice: 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.

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.



Cert. No.: P-13343
File No.: 791.10
Job No.: 262.1-007153-1

Product description

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

Steel Type: 1.4301/1.4401/1.4404

Dimensions:										
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

Steel Type: 1.4301/1.4401/1.4404

Dimensions:									
Outside Diameter (mm)	13,5	17,2	21,3	26,9	33,7	42,4	48,3	60,3	
Wall thickness (mm)	1	1	1,2	1,2	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

Dimensions:										
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

Dimensions:									
Outside Diameter (mm)	13,5	17,2	21,3	26,9	33,7	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	

Product description:

Coupling

Slip coupling

90°Elbow

90°Elbow one plain end

45°Elbow

45°Elbow one plain end

90°Female angle

adaptor

90°Male angle adaptor

Oyph



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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 piping system may not penetrate enclosed spaces below the freeboard deck (e.g. watertight- or fire bulkheads).

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

Pipe penetrations through watertight bulkheads or fire bulkheads or decks shall be approved in each separate case.

The piping system is subject to a hydraulic pressure test to 1.5 times maximum allowable working pressure after assembly on board.

The piping system is not to be used as suction lines.

Original



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Type Approval documentation

Manufacturer's catalogue 2009.
Test reports witnessed by DNV.

Tests carried out

Burst, vibration, pressure pulsation, pull-out

Marking of product

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

- Manufacturer's name or trade mark.
- Type designation
- Size

Certificate retention survey

For retention of the Type Approval, DNV Surveyor shall perform a survey every second year - and before the expiry date of this certificate - to verify that the conditions for the type approval are complied with and to witness burst testing on a selection of samples of couplings selected at random from stock or from the running production.

END OF CERTIFICATE