DNV·GL

Certificate No:
TAP000007B

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Press fittings

with type designation(s)
Marinepress

Issued to
RACCORDERIE METALLICHE S.P.A.
Marcaria MN, Italy

is found to comply with
DNV GL rules for classification – Ships Pt.4 Ch.6 Piping systems
DNVGL-OS-D101 – Marine and machinery systems and equipment, Edition July 2015

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Temperature range:	**Dependent on rubber sealings, see certificate**
Max. working press.:	**16 bar (max 7 bar for flammable fluids and steam service)**
Sizes:	**Ø15 - Ø108**

This Certificate is valid until **2020-12-31**.

Issued at **Høvik** on **2016-01-21**

for **DNV GL**

DNV GL local station: **Milan**

Approval Engineer: **Adel Samiei**

Marianne Spæren Marveng
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.

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Job Id: **262.1-017820-2**
Certificate No: **TAP000007B**

Product description

Cupronickel press fit tube fittings, with internal elastomer sealing rings.

Materials:

Fitting and Pipe:
CuproNickel: WL 2.1972 – CuNi10Fe1.6Mn according to DIN86019
Sealing rings: EPDM/ NBR/ FKM/ MVQ

Fire tested type: With MVQ (red) sealing ring.

Application

Approved for Class III piping systems in the following systems:

- INERT GAS
  - Water seal effluent lines
  - Scrubber effluent lines
  - Main lines (In pump rooms and open decks and not inside machinery spaces of category A or accommodation spaces - only approved fire resistant types)
  - Distributions lines (In pump rooms and open decks - only approved fire resistant types)
- FLAMMABLE FLUIDS (flash point >60°C) (Fire tested type)
  - Cargo oil lines (In pump rooms and open decks) (Max 7 bar)
  - Fuel oil lines (Not inside machinery spaces of category A or accommodation spaces) (Max 7 bar)
  - Lubricating oil lines (Not inside machinery spaces of category A or accommodation spaces) (Max 7 bar)
  - Hydraulic oil (Not inside machinery spaces of category A or accommodation spaces)
  - Thermal oil (Not inside machinery spaces of category A or accommodation spaces) (Max 7 bar)
- SEA WATER
  - Cooling water systems: (Fire tested type in Machinery space A)
  - Tank cleaning services
  - Ballast system: (Fire tested type in Machinery space A)
  - Bilge system: (Fire tested type in Machinery space A)
  - Fire mains and water spray: (Fire tested type)
  - Foam system: (Fire tested type)
  - Sprinkler system: (Fire tested type)
  - Non-essential systems
- FRESH WATER
  - Cooling water systems: (Fire tested type in Machinery space A)
  - Condensate return : (Fire tested type in Machinery space A)
  - Non-essential systems: Air condition system, heating.
- SANITARY/Drains
- SERVICE AIR (NON-ESSENTIAL)
- Starting/Control air (Fire tested type in Machinery space A)
- Brine
- Steam (Max 7 bar)

Temperature limitation for elastomer sealing rings:

Type of Elastomer	Temperature range	Maximum operating Pressure
EPDM	-20ºC to +120ºC	16 bar
NBR- Nitrile	-20ºC to +70ºC	5 bar
FKM – Viton	-20ºC to +220ºC	16 bar
MVQ- Silicone	-55ºC to +180ºC	16 bar

Limitation

Fittings covered by this certificates may only be used in Class III piping systems.

Maximum design temperature for fuel oil, lubricating oil and flammable hydraulic oil is +60°C

Maximum working pressure 7 bar for flammable fluids and steam.

The components are to be mounted according to manufacturer's instructions.

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

Type Approval documentation

Tests carried out

Type testing is done according to DNV TAP 5-792.20: Leakage test, vibration test, burst pressure test, pull-out test and fire test

Marking of product

For traceability to this type approval, each fitting is as a minimum to be marked with:

- Manufacturer's brandname or trade mark
- Size

Periodical assessment

For retention of the Type Approval, DNV GL Surveyor shall perform a periodical assessment every second year, to verify that the conditions for the type approval are complied with and to witness the burst tests on a selection of sizes.