



Verniciatura Industriale Pesarese

Coating Services
Solutions against time

PU FOAM POLYURETHANE FOAM

PU foam pipes and/or bends coating is added on the external surface of pipelines when thermal insulation is required. The fluid flowing inside the line maintains its viscosity thanks to superior insulation properties and low thermal conductivity. The coating reduce heat loss and prevent hydrate formation in subsea gas pipelines. The foam is injected between the pipe and an HDPE (high density Polyethylene) jacket, according to EN 12 201, the jacket is custom cut in case of bends.

District heating pipes



Preinsulated bonded pipe systems for directly buried hot water networks. It is a three layers pipe assembly of steel service pipe, polyurethane thermal insulation and outer casing of polyethylene. The polyurethane foam has a very low thermal conductivity, which is due to the porous structure and the low conducting gases trapped in the cells of the foam.

Thermal insulation



Thanks to the level of thermal conductivity and its rate of degradation can be interpreted as an economically and environmentally cost or gain. This coating is mainly used for hot fluid transportation from thermal power stations to factories as well as residential units, often are widely used for the transport of oil and chemicals and for district heating and cooling systems. About the foam layer:

- . Foam density: 80Kg/m³ ASTM D1622
- . Foam initial thermal conductivity at 23°C: 24 mW/mK UNI7891
- . Foam compression resistance: 300KPa UNI6350



Application

Internal lining

Applicability - **Limitless amount**

- | | |
|-----------------------|-------------------|
| SMALL AND LARGE PIPES | STANDARD FITTINGS |
| BENDS | FLANGES |
| CUSTOM PIECES | BUCKLE ARRESTORS |
| FIELD JOINTS | TANK |
| WATERWORKS COMPONENTS | VALVES |

Inspection & Testing

In our internal laboratory, we perform all the tests and inspections during all the project's phases, carried out with NACE certified staff.

Coating typical properties

Yeld strength : <19 MPA according to EN ISO 6259

Trasversal resistivity (23°C): >10¹⁷ Ωcm
according to DIN 53482

Coating capacity

PIPES

Diameter from 1/2" to 120"

Indefinite maximum unit **length**

Maximum unit **weight** 15,000 kg

JOINTS AND/OR CUSTOM PIECES

(Bends, tees, reducers, flanges, etc.)

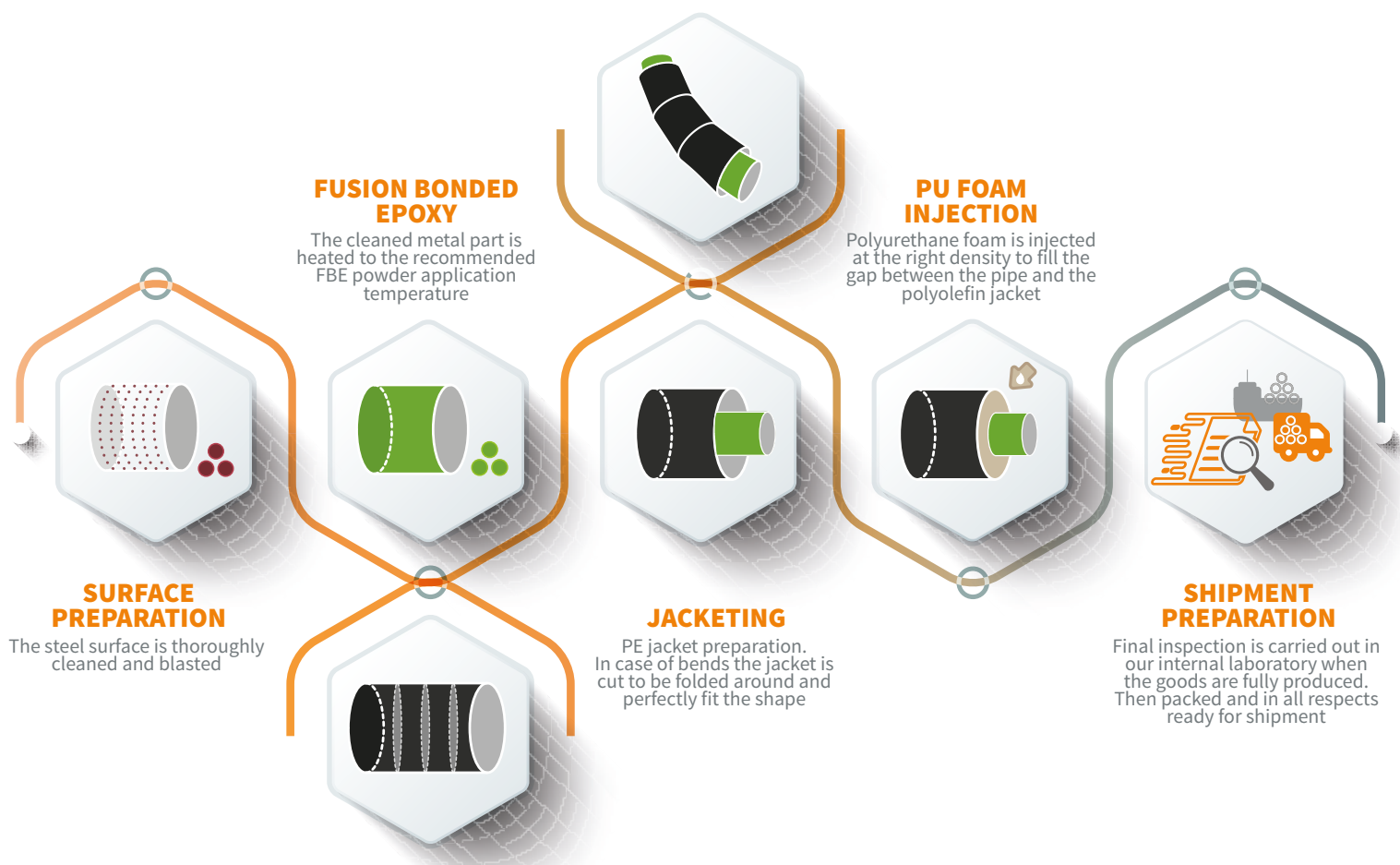
Maximum **size** 3.0 x 3.0 x 13.5 meters

Maximum **unit weight** 15,000 kg

Maximum **thickness** of the coating 3,5 mm



POLYURETHANE FOAM



GENERAL TESTING

These are merely approximate values adjustable according to clients' requirements.

PROPERTY	TEST DESCRIPTION	TYPICAL VALUES
Thermal conductivity (23°C)	DIN 52612	0,38 W/m°C
Elongation at break	EN ISO 6259	>350%
Oxydation induction time	EN 728	>20min at 200°C
Hydrostatic strength	UNI EN 921	>170h at 80°C - 3.0MPa
Final density	ISO 1183	>950 Kg/m ³



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