KEMICA COATINGS
Reinventing coatings

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Offshore

EXTERNAL PIPELINE COATING

TECHNICAL PROBLEMS

Whether made from steel, cast iron or concrete, pipes must be given external protection against a hostile environment. The system and degree of protection necessary depends on the type of environment and the conditions of use (or inspection and reparability of the tubes).

TRADITIONAL SOLUTION

• **for buried pipes:**
- Healthy, non-aggressive environments: coating in pitch or epoxy pitch. In English-speaking countries, there is a tendency to use epoxy powders protected by polyethylene sheathing.
- Aggressive environment: brine, etc. : epoxy powder.

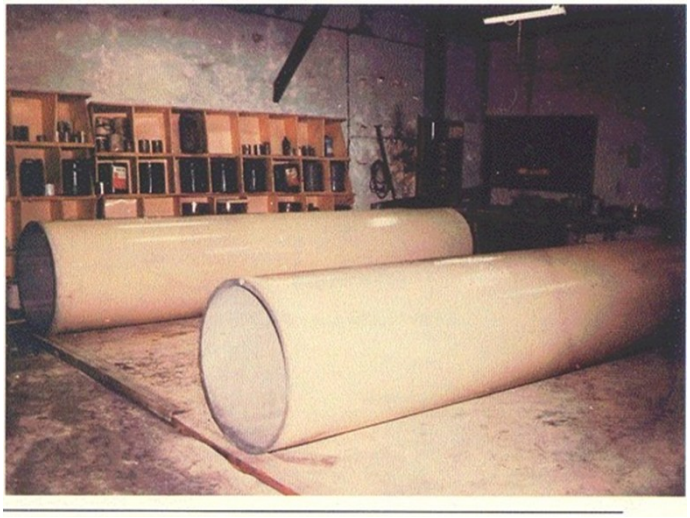
• **for submerged pipes:**
- Polyethylene duct and epoxy powder
- System of several layers of bitumen-coated felt + concrete duct

• **for open-air pipes:**
- Paint systems
- Epoxy powder

SOUPLETHANE TECHNIQUE

Whichever type of application is required (buried, submerged, open air), SOUPLETHANE UR 6 provides an effective and long-lasting solution.
The tubes are coated in the workshop (after being shot-blasted), with the product sprayed on using a high-pressure twin component airless pump.
It is applied in a single layer, for any thickness (from 0.5mm to 5mm if necessary).
Examples of the various specifications:
- Open-air tubes, non-aggressive environment: thickness 0.5mm
- Open-air tubes, aggressive environment: thickness 1 mm
- Open-air tubes, hot, aggressive environment: thickness 2 mm
- Buried tubes: thickness 1.5 mm
- Buried tubes in an aggressive environment (brine): thickness 2 mm.
- Submerged tubes: thickness 2 mm

• **the advantages of this technique:**
Extremely long-lasting protection: an estimated lifetime of 30 years
- Pressure resistance (buried pipes: 600 kg/cm²)
- Chemical resistance: pH levels from 1 to 13 in salt mist (or saltwater)
- Can be repaired cold (in the event of impacts during handling on site)
- Joints can be treated on site
- UV resistant and follows the seasonal temperature variations (winter, summer) without any alterations.



SPECIFICATION

- Sandblasting: SA 2.5.
- Apply SOUPLETHANE using an airless twin-component high-pressure pump, as thickly as necessary. The ends of the pipes will not be coated to enable welding and joint treatment.

QUALITY CONTROL
- Check the thickness with a microtest
- Check the continuity of the film (no holes, porosity, etc.) and the quality of the film (no blisters, good polymerisation, etc.)
- Check the porosity using a holiday detector.

TESTS AND CERTIFICATIONS

• Resistance to salt mist: SNCF-Levallois Laboratory - 2 000 h salt mist
• Chemical resistance: Labo SGN, Rhône Poulenc
• Resistance to de-icing salt: Bouygues- Cebtp

WORK REFERENCES

• COGEMA: The Hague
• CDF Chemistry
• Saint Antoine Hospital