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PGL Project Tunnel 9 –Rehabilitation of 36” condensing pipe
STOPAQ Case study



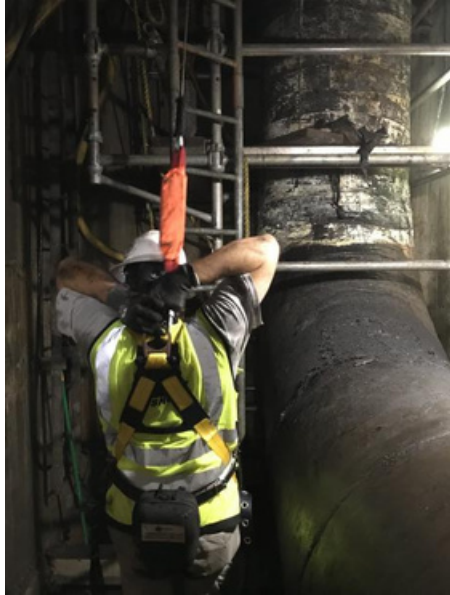
PGL Project Tunnel 9 –Rehabilitation of 36” Condensing Pipe

- Client: -
- Engineering -
- company: Contractor: -
- Location: -
- Conditions: Partly wet surface, condensing
- Current line coating: Coal tar tape
- Object: 36” pipe
- Length: 100 meters horizontal
50 meters vertical
- Year of application: 2019
- Coating system: STOPAQ® Wrappingband CL
STOPAQ® Outerwrap HSPEX
STOPAQ® OuterglassShield XT (at pipe supports)
- Surface preparation: SSPC-SP 3



Challenges:

- Accessibility
- Condensing surface
- High Humidity
- Confined space
- Project time frame
- Only minimum surface preparation
- possible Low temperature
- After application tunnel will be submerged
- 25 years life expectancy requirement





Solution:

- **First layer: STOPAQ® Wrappingband CL**
 - STOPAQ® Wrappingband CL is a corrosion preventing wrap material, adhering extremely well to wet surfaces such as bare -or coated –steel pipelines suffering from condensing water. It is based on a compound containing non-crystalline, low-viscosity, non-crosslinked, (fully amorphous) pure homopolymer Polyisobutene. STOPAQ® Wrappingband CL is viscous at the indicated operating temperatures and, due to its liquid nature, flows into all irregularities of the substrate. The compound does not cure and is unable to build up internal stress.
 - STOPAQ® Wrappingband CL has been delivered in 100mm x 10m rolls and is applied with min. 10mm overlap. Overlap indication is printed on the backing of the material.

- **Second layer: STOPAQ® Outerwrap HSPEX**
 - STOPAQ® Outerwrap HSPEX is an outer wrap tape, providing mechanical protection to corrosion preventing coating systems comprising STOPAQ® Wrappingband CL. It is made of a radiation cross-linked high density polyethylene backing (HDPE) and high tack butyl rubber adhesive, provided with a siliconized PE release liner for proper unwinding of the roll. STOPAQ® Outerwrap HSPEX is well suited for above ground, underground and submerged applications. The butyl rubber adhesive layer provides good adhesion to the backing of STOPAQ® Wrappingband, to existing plant applied PE coating, as well as to its own backing. STOPAQ® Outerwrap HSPEX is a highly flexible UV-resistant tape, providing good resistance of the complete coating system to impacts, indentations and abrasion, as well as resistance against the influences from various chemicals.
 - STOPAQ® Outerwrap HSPEX has been delivered in 4" x 50' rolls and is applied with min. 50% overlap.



- Third layer: STOPAQ® OuterglassShield XT (only at pipe supports)
 - STOPAQ® OuterglassShield XT Grey is a solvent free pre-impregnated bi-axial woven glass-fibre reinforced outer wrap wrapping cloth, curing to a hard shield by means of a water activated polyurethane resin. STOPAQ® OuterglassShield XT is used as a rigid mechanical and impact resistant layer on pipeline steel surfaces protected by a primary layer of STOPAQ® corrosion preventing coatings such as Wrappingband and a flexible mechanical tape such as STOPAQ Outerwrap. The material can be applied in various thicknesses depending on the mechanical impact stress class required according to the client specification.
 - STOPAQ® OuterglassShield XT Grey has been delivered in 8" x 60' rolls and is applied with min. 67% overlap.



Benefits:

- Can be applied on condensing surface;
- Controlled cold flow providing permanent inflow into the finest pores of the substrate;
- Resistance to low temperatures without getting brittle;
- Conforms to irregular shapes;
- Low surface tension; adheres on many types of dry and wet substrates at a molecular level;
- Surface tolerant: no blasting techniques required, wire brushing is sufficient (ISO 8501-1: St 2);
- Constant film thickness;
- Adhesion based on vanderWaalsforces;
- Fast and easy to apply, 24 meter per day applied on 36”;
- Easy to control application;
- Can be moulded onto various types of irregular shaped objects;
- Shorter cycle times for the entire coating process;
- Excellent compatibility and performance with many kinds of substrates.

Result:



