

HPC CASES REPORT 2020

GOLD MINE

RAND GOLD RESOURCES

- Markets: Energy & Mining
- Country: Congo
- Courtesy of: Superior Products South Africa

PROJECT DESCRIPTION

There were oil pipelines and heat exchangers that need to be insulated, the operating temperature was equal to 220°C, and the required surface temperature was 55°C. The customer was looking for a maintenance free solution, because the site was also located at a remote area where structural maintenance was expensive and not a real option.

COATING SOLUTION

The site where the project was completed was 100 meters pipeline (including heat exchangers and valves) measuring a total area of +/- 110 m². To achieve the rated level of heat losses and temperature reduction at the surface to 55°C, with the use of Graco equipment the HOT PIPE COATING was applied by spray with a thickness of 15mm.

PRODUCTS USED:

Hot Pipe Coating™





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OFF-SHORE PLATFORM

PEMEX OIL

- Markets: Energy & Mining, Industry & Manufacturing
- Country: Gulf of Mexico
- Courtesy of: Superior Products Mexico

PROJECT DESCRIPTION

Multiple applications were done on the Off-shore platform, including anti-corrosion applications with **RUST GRIP** & **ENAMO GRIP**, plus CUI treatment with **HOT PIPE COATING**.

PRODUCTS USED:

[Hot Pipe Coating™](#)

[Rust Grip®](#)

[Enamo Grip](#)





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BIO COMPOST

BIOCOMPOST BG OOD

- Markets: Farming & Agriculture
- Country: Bulgária
- Courtesy of: SUPERIOR PRODUCTS BALKANS

PROJECT DESCRIPTION

Bio compost has designed a revolutionary microbiological product which is engineered to maximize agricultural yields while minimizing inputs and cost. The process done through a 100% natural, concentrated, microbial biomass (fertilizer). Contains certain live, naturally occurring aerobic and anaerobic soil microorganisms and their nutrient medium. The tanks supporting this process needed to be insulated to regulate the temperature in the tank.

COATING SOLUTION

RUST GRIP was applied as an anti-corrosion primer. After that **HOT PIPE COATING** was applied to the 120m² area with the needed 5mm thickness required to obtain the optimal result. Finally **ENDUROOF** top coat was added as a protective layer to help guard the tank against the elements.

PRODUCTS USED: [Rust Grip® - Hot Pipe Coating™ - Endu Products](#)





GAS COMPRESSOR

PEMEX OIL

- Markets: Energy & Mining, Industry & Manufacturing
- Country: Gulf of Mexico
- Courtesy of: Superior Products Mexico

PROJECT DESCRIPTION

There was a need to conserve energy and prevent corrosion under insulation of an Ingersoll Rand gas compressor on one of the off-shore platforms. Furthermore, an important aspect of the project was to reduce operating temperatures (170°C to 60°C & 220°C to 60°C) in order to prevent the staff from being exposed to unacceptable temperatures. The application needed to be done while the equipment remained fully in operation.

COATING SOLUTION

- With the use of Graco equipment the **HOT PIPE COATING** was applied by spray with a thickness of approximately 24mm-20mm wet to be between 18mm-15mm dry.
- **RUST GRIP** was then applied with a thickness of 8 mils wet to get to 4 mils dry.
- Finally, **ENAMO GRIP** was applied with a thickness of approximately of 10 mils wet to get 5 mils dry.

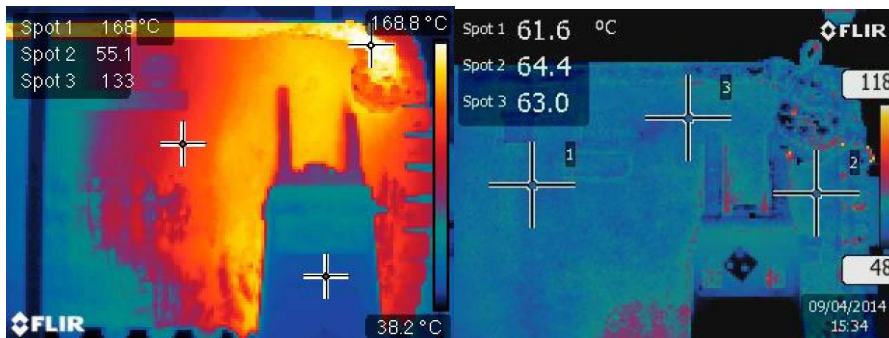
PRODUCTS USED

[Hot Pipe Coating™](#)
[Rust Grip®](#)
[Enamo Grip](#)



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ITALIAN AUTOMOBILE MANUFACTURER

CONFIDENTIAL

- Markets: Energy & Mining, Industry & Manufacturing
- Country: Serbia
- Courtesy of: Superior Products Balkans

PROJECT DESCRIPTION

There was a need to insulate a portion of the boiler room in order to reduce energy losses at the different elements (valves, flanges, strainers, etc) and to reduce the surface temperature to acceptable safety levels for the personnel.

COATING SOLUTION

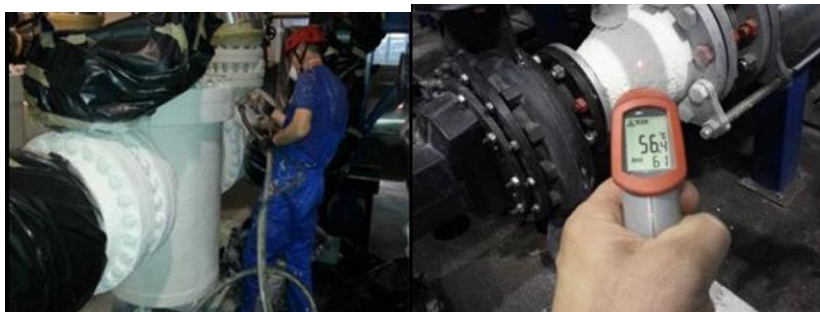
HOT PIPE COATING at an average thickness of 12mm.

RESULTS

Initial surface temperature: 125°C

After Application: between 55°C to 60°C

PRODUCTS USED: [HOT PIPE COATING™](#)





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INTERNATIONAL BEER BREWER

CONFIDENTIAL

- Markets: Industry & Manufacturing
- Country: Poland
- Courtesy of: Superior Products Poland

PROJECT DESCRIPTION

Different valves and filters throughout the production line needed to be insulated in order to reduce the exterior temperature and reduce loss of energy.

COATING SOLUTION

HOT PIPE COATING was applied 9-10mm thick. The smaller the object the rougher the structure of the applied **HOT PIPE COATING**. Application was finished with acrylic lacquer.

RESULTS

Initial temperature was +170°C, ambient temperature was +35°C. Temperature after application was between 50°C and 60°C, depending on where the reading was taken.

PRODUCTS USED: [Hot Pipe Coating™](#)





FRENCH MULTINATIONAL UTILITY COMPANY

VEOLIA

- Markets: Telecom & Infrastructure
- Country: Belgium
- Courtesy of: Superior Products Europe

PROJECT DESCRIPTION

There was a need to insulate a concrete tunnel at the water treatment plant in Brussels. The objective was to prevent the heating up and expansion of concrete walls (0.30m thickness) after cracks were injected with epoxy mortars against water leakage.

Max temperature allowed: 75°C

Temperature hot air inside when in operation: 120°C

Air Pressure: 1.2 bar

Air speed in tunnel: 10m/sec

COATING SOLUTION

1st – RUST GRIP at 16 m²/gal

2nd – HOT PIPE COATING at 0.75 m²/gal

3rd – SUPER THERM at 9 m²/gal

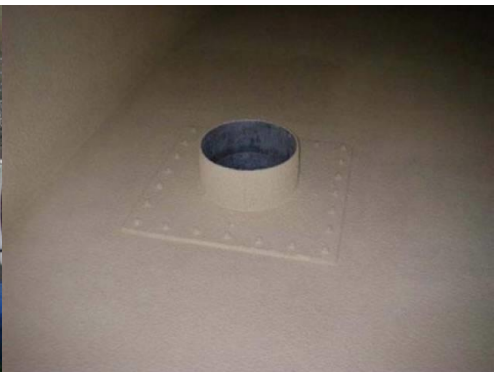
PRODUCTS WE USED

[Rust Grip®](#)
[Hot Pipe Coating™](#)
[Super Therm®](#)





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OIL RECYCLING TANK

CLEAN ENERGY CORP

- Markets: Energy & Mining, Industry & Manufacturing
- Country: South Korea
- Courtesy of: Superior Products South Korea

PROJECT DESCRIPTION

Purpose of the project was to ensure temperature control for used Oil Recycling Tank, Heat Exchanger, and Pipelines in order to ensure workers safety and physical protection.

COATING SOLUTION

Application area: Boiler Condenser (Heat Exchanger), Tanks and Pipelines (Total: 1,100m²) Stainless Steel (Tank), Carbon Steel (Boiler outer surface, Pipes)

Application method:

- Pressure-wash: Removed all oil residues from the surface
- HPC was applied in 3 layers (Total 5mm wet thickness)

PRODUCTS USED: Hot Pipe Coating™



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GEOHERMAL INSTALLATION

CONFIDENTIAL

- Markets: Industry & Manufacturing
- Country: Iceland
- Courtesy of: Superior Products Europe

PROJECT DESCRIPTION

Reduce loss of heat from geothermal steam pipes and pumps.

COATING SOLUTION

HOT PIPE COATING was applied while the installation was operational and surface temperature was reduced from 190°C to 64°C.

PRODUCTS USED:

Hot Pipe Coating™





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DEEP SEA OIL RIG

ENI - SAIPEM

- Markets: Energy & Mining
- Country: Angola
- Courtesy of: Superior Products Italy

PROJECT DESCRIPTION

Reduce loss of heat from steam pipes and valves on an off-shore oil rig.

COATING SOLUTION

HOT PIPE COATING was applied, on board the rig while the installation was operational.

PRODUCTS USED:

[Hot Pipe Coating™](#)





CHEMICAL FACTORY, DAESAN

LG CHEMICALS

- Markets: Energy & Mining
- Country: South Korea
- Courtesy of: Superior Products South Korea

PROJECT DESCRIPTION

Purpose of the project was to insulate the full installation system of an incinerator in order to improve energy efficiency.

COATING SOLUTION

HOT PIPE COATING was applied to different elements of the plant.

Note:

- A direct coating on the surface was done without a pre-treatment
- Application was easy even in areas of frequent access points

RESULTS

Result after insulation:

INCINERATOR (1) : $\Delta T = - 130^{\circ}\text{C}$
INCINERATOR (2) : $\Delta T = - 150^{\circ}\text{C}$
STRAINER (1) : $\Delta T = - 125^{\circ}\text{C}$
TRAP : $\Delta T = - 130^{\circ}\text{C}$
VALVE : $\Delta T = - 105^{\circ}\text{C}$
STRAINER (2) : $\Delta T = - 130^{\circ}\text{C}$
FLANGE (1) : $\Delta T = - 85^{\circ}\text{C}$
CHANNEL COVER : $\Delta T = - 105^{\circ}\text{C}$
FLANGE (2) : $\Delta T = - 130^{\circ}\text{C}$

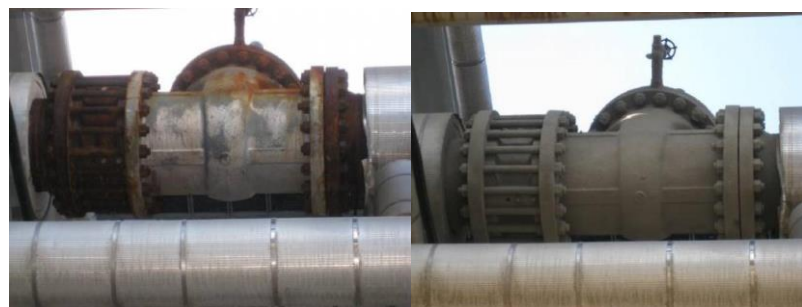
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PETROLEUM & REFINERY COMPANY

HYUNDAI OIL BANK

- Markets: Energy & Mining
- Country: Korea
- Courtesy of: Superior Products South Korea

PROJECT DESCRIPTION

Coating Surface: Heat exchanger cover, carbon steel base.

Purpose: Prevent heat loss from heat exchanger cover thereby increase energy efficiency

COATING SOLUTION

HOT PIPE COATING – 3 applications after grinding the metal surface (total 12 – 15 mm)

SUPER THERM – 2 applications for sealing (200 micron in thickness)

ENAMO GRIP – 1 application for smooth surface (75 micron thickness)

PRODUCTS USED: [Hot Pipe Coating™](#) - [Super Therm®](#) - [Enamo Grip](#)





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INDUSTRIAL FURNACE

CONFIDENTIAL

- Markets: Industry & Manufacturing
- Country: Poland
- Courtesy of: Superior Products Poland

PROJECT DESCRIPTION

There was a need to reduce heat radiation and save energy from a production furnace.

COATING SOLUTION

Preparation was done by cleaning, degreasing and removing concrements (on cold furnace). Afterwards a combined application of **HOT PIPE COATING** and **HOT SURFACE COATING** (on hot furnace) was done followed by 2 coats of **RUST GRIP**.

On the doors, which were the hottest, **HOT PIPE COATING** of +/-8mm was applied, followed by 4 mm of **HOT SURFACE COATING** to have a smoother finish. On the rest of the furnace, 3 mm of **HOT SURFACE COATING** was applied.

RESULT

Initial surface temperature: 60°C up to 220°C

After Application surface temperature: between 40°C to 65°C

PRODUCTS USED:

[Hot Surface Coating™](#)
[Hot Pipe Coating™](#)





INTERNATIONAL PETROCHEMICAL COMPANY (OFF-SHORE)

BP

- Markets: Energy & Mining
- Country: Off-Shore
- Courtesy of: Superior Products International

PROJECT DESCRIPTION

HOT PIPE COATING was applied on two glycol exchangers on an offshore site in the Gulf of Mexico to provide thermal insulation and prevent CUI. Insulation removal and recoating was necessary to resolve Priority 2 inspection finding resulting from CUI under foam glass insulation. The 165°C surface temperature would require 5 days shutdown to strip, water-blast, and recoat-> alternative means to recoat and re-insulate while online were sought out.

COATING SOLUTION

HOT PIPE COATING

- **HOT PIPE COATING** w/ GTX 2000 hopper, 2-4 mm tip
- Applied **HOT PIPE COATING** ~700 mils wet, dried to ~500 mils
- Moisture content after 24 hrs <1%

PRODUCTS USED:

[Hot Pipe Coating™](#)





The State Oil Company of Azerbaijan Republic

SOCAR

- Markets: Industry & Manufacturing
- Country: Azerbaijan
- Courtesy of: CST & SUPERIOR PRODUCTS EUROPE

PROJECT DESCRIPTION

An Oil Separator suffered from C.U.I and customer needed to replace insulation and prevent further damage. In addition they looking to save energy and give personal protection. The tank surface temperature is +/- 150°C and is located outside in heavy industrial area.

COATING SOLUTION

Old cladding and fiber insulation were removed and loose corrosion hand tool cleaned. 2 heavy coats (125 – 150 μ WFT) **RUST GRIP®** were applied. 1st coat to encapsulate remaining corrosion and 2nd also to glue 1st thin coat **HOT PIPE COATING™**. Consequently, the next layers were build up till the desired thickness of 12 mm **HOT PIPE COATING™** was achieved. Finally, for sealing and weathering protection, **ENDUROOF** in 2 different layers was applied.

RESULTS

Customer decided after 2 years to proceed with the next oil separators.

PRODUCTS USED

[Rust Grip®](#)
[Endu Products](#)
[Hot Pipe Coating™](#)



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