Nanotechnology Offers New Solutions for Thermal Insulation and Assets protection
NANOISOLA Industrial

NANOISOLA Industrial - NI
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✓ Can be applied on:
- HVAC
- Pipelines
- Valves & Flanges
- Purification vessels
- Food Processing
- Volatile Storage Tanks
- Manufacturing Equipments
- Storage & Processing Tanks
- Petroleum & Chemical Refining
NANOISOLA Industrial Use

Pipelines

Production & Manufacturing Salons and Warehouses
NANOISOLA Industrial Use

Storage & processing Tanks
NANOISOLA Industrial Use

Food, Sugar & Dairy Industry: Storage Tanks - Processing Equipment - Pipeline

Food, Chemical & Petroleum Refining: Valves & Flanges
NANOISOLA Industrial Use

Purification Vessels & Processing Equipment

Silos
Application Method

✓ Surface must be clean and dry and free of grease, dirt solvents, etc.
✓ Apply directly to the surface.
✓ Each coat should be applied 500 microns in thickness with 8 hours dry time between each coat.
✓ Two coats is the recommended minimum coverage.
✓ Application temperature range: 15°C to 70°C
✓ Typical application: 1-6 coats - 0.5 mm up to 3 mm
✓ Coverage per pail: 30 m² @ 1 coats, 10 m² @ 3 coats
Application Method

SURFACE PREPARATION:

✓ Remove all loose contamination by wire brushing.
✓ Remove all dirt, grease, oil, soluble salts and other contaminations.
✓ Remove all loose, flaking rust and/or paint by one of the following methods:
  - If unable to sandblast use:
    ✓ St 3 Power Tool Cleaning
  - If able to sandblast use:
    ✓ Sa 2.5 Blast Cleaning
Application Method
Case Study: Oil & Gas

Issue:
A large petrochemical facility needed to stop vaporization of volatile gas by insulating tanks efficiently. The chemical plant is located in the Middle East where humidity between %75 to %90 makes traditional insulation materials impractical to use due to their fast absorption of moisture.

The use of NANOISOLA Industrial Paint Insulation in a major Petrochemical company
Case Study: Oil & Gas

Solution:
Two layer application of NANOISOLA was sprayed to the large storage tanks. NANOISOLA insulation technology was chosen for the project for the following reasons:

- An insulating material with extremely low thermal conductivity was desired, for maximum energy savings.
- An insulating material with strong resistance to radiant heat from the sun was desired.
- They needed an insulation that would maintain its insulating properties in the high humidity environment.
- They needed corrosion resistance, and an insulation that would not cause CUI (corrosion under insulation).

During the warmest months, the ambient temperature gets as high as 55°C (131F). When volatile gases reach temperatures in excess of 33°C (91F), it begins to evaporate.

NANOISOLA Paint Insulation eliminated the loss of product due to evaporation.
Case Study: Oil & Gas

Issue:
- 330m long Pipe line in the sizes 3” & 6” respectively needs to be insulated, using Nano sprayable Insulating Paint. The Liquid fluid inside the pipe is 65°C, which needs to reach ambient temperature

Solution:
- NANOISOLA Paint Insulation has been used in this case, Two (2) layers, of NANOISOLA Industrial has been used.
- The first layer 500 microns, has been applied, (8 hour curing is needed between every interval). All together 1 mm has been applied.

The use of NANOISOLA Industrial Paint Insulation in a Oil & Gas Producing Company
CASE STUDY - CHEMICAL PLANT

Solution:
Elimination of CUI and Reduction of Energy Use

- Customer: Chemical Plant that needed a solution for their “Brine Super Purification Columns” being installed at their job site in the Middle East.
- Application: NANOISOLA Industrial applied in three coats to the exterior of the large columns.
- The coatings provided both thermal insulation and corrosion resistance to extend the lifetime of the equipment while reducing energy used for the brine purification process.
CASE STUDY - CHEMICAL PLANT

1) OBJECTIVES

- ENERGY SAVINGS
- ELIMINATION OF CORROSION UNDER INSULATION (CUI)
- Water-based acrylic coating insulates, reduces energy consumption and costs and eliminates issues with CUI.

2) BENEFITS

- Thermal Insulation
- Corrosion Resistance
- Easy Application
- Long-Term Performance
- Reduction in Energy Consumption
- Durability in Harsh Climate
- Elimination of CUI issues
NANOISOLA coatings offer a solution to one of industries most costly issues - Corrosion Under Insulation (CUI). By combining key performance benefits of thermal insulation PLUS corrosion resistance in a coating which bonds with the surface, the possibility for corrosion (which is generally caused at the interface between the surface and traditional forms of insulation) is eliminated.

In addition, NANOISOLA coatings stand up to harsh environments including high humidity, desert or marine environments while maintaining consistent performance over time.
Case Study: Polyethylene Storage Tank

Issue:
- Reduce temperature of water inside the tank to safer levels, insulate tank to keep the water cool.

Solution:
- NANOISOLA was used by the customer on a polyethylene storage tank on the roof. The temperature of the water inside the tank was noticeably reduced, creating a safer use for family, and the insulation provided by NANOISOLA increased the efficiency of the tank, saving money and energy.

Reduce temperature of water inside the tank
Case Study: Polyethylene Storage Tank

Solution:

- We used NANOISOLA this summer to paint a 1000 gallons polyethylene tanks which is positioned outdoors on the roof. This tank is used for storage water.
- The water inside of the tank was previously too hot to use specially in the summer. With two coats of NANOISOLA applied, the water was now cool to use for the family. Preliminary results showed a 10 degrees Centigrade difference after 2 coats coverage (approx. thickness of 1 mm).
Case Study: Train

Fuel tank & Equipment of Train
More Information

Nanofan Industrial Coatings LLC
Nanotechnology Products - Advanced Coatings

Factory: Unit 5, Plot No. 3365, Sohar free zone, Sohar, Oman
Office: No. 10282, 10th St., Maabilah Ind. Area, Muscat, Oman
Tel +968 26 704994  Fax +968 26 704994  Mobile +968 9099 6490
CR Number 1243171, oman@nanofanco.com

www.nanofanco.com