

Formosa Chemical and Fiber Corporation (FCFC)

Prevention of Corrosion Under Insulation (CUI)
and prevention of corrosion from atmospheric
exposure hot application of coatings

Case study

Facility Type

Aromatic Plant

Owner

Formosa Plastics Group (FPG)

Division

Formosa Chemical and Fiber Corp. (FCFC)

Location

Mailiao, Taiwan

Project Date

March 2011

Contractors

Penderlo Enterprises

Substrate

Carbon Steel

Surface Prep

SSPC SP-6

Coatings

PPG HI-TEMP® 1027

Project Size

2011 - 500 gallons

2012 - on-going

The Customer

Formosa Chemical and Fiber Corporation (FCFC) produce petrochemical, plastic and fiber products, and the output of nylon and rayon at this plant is among the largest in the world. The three aromatic plants have a capacity of 696 KMT of Benzene and 823 KMT of Para-Xylene per year. Over the past years, owners have discovered an increasing number of coating failures and corrosion as insulation materials were removed and the substrates were inspected.

The Description

In the three aromatic plants, there are pipe networks and various production and storage tanks with in-service temperatures ranging from 212°F to 600°F [100°C to 310°C]. The owners chose PPG HI-TEMP 1027 to provide the solution to their corrosion under insulation (CUI) problems for the pipelines and the tanks. PPG HI-TEMP 1027 was also chosen because it is designed to be applied directly to hot, operating equipment, eliminating the need for costly shutdowns. Other important considerations included the ability to withstand thermal shock and thermal cycling at elevated temperatures, as well as the ease of application. They found that PPG HI-TEMP 1027, with its one component formulation, could be easily applied in a reduced amount of time when compared to other coating products. PPG HI-TEMP 1027 was applied in two coats of 5-6 mils [125-150 mils] each for a total of 10-12 mils [250-300 microns] over abrasive blast clean surfaces.

Over 500 gallons of PPG HI-TEMP 1027 were applied in 2011 within this division, and more pipes and tanks are coated with PPG HI-TEMP 1027 every day, solving Formosa's corrosion problems and saving costs.

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