

# SIGMALINE® 415: Internal Pipeline Refurbishment for Middle East Oil Major



## PPG's SIGMALINE® 415 in situ application delivers major cost savings

### The Customer

The customer is a major oil company operating in the Middle East. Saudi Arabia is one of the most important oil countries in the world, supplying more than 10% of global oil demand. In 2013, it had the world's largest oil reserves and significant natural gas reserves (the fourth largest in the world).

### The Challenge

With such a high-profile Middle East oil and gas customer, the requirement was to provide optimal protection and minimal disruption at an economical cost.

On this project, as with many others, the challenge was to deliver the most cost-effective system compared to alternatives, supported by highly technical solutions, technical support and advice. The overall aim for the pipeline refurbishment was not simply a 'quick-fix' but to offer a long-lasting solution that would help reduce the total cost of ownership.

### The Solution

PPG Protective & Marine Coatings (PPG) has a range of specialty pipeline solutions using protective coatings that have been proven in the most demanding situations. The *SIGMALINE* 415 epoxy coating has been specially designed to support the refurbishment of pipelines by coating pigs and was identified as the ideal answer to the customer's needs. In situ application with the *SIGMALINE* 415 coating for steel pipes is suitable for transporting sweet crude oil, diesel, fresh water, saltwater and many chemical solutions.

### The Customer

Major oil and gas company in the Middle East

## The Location

Middle East

## The Challenge

To provide the most cost-effective solution to re-use an aged pipeline infrastructure.

## The Solution

Application of *SIGMALINE* 415 in the installed pipeline.

## The Benefits

Quick and cost-effective lifetime extension for existing pipelines.

## The Result

In situ application with *SIGMALINE* 415 for the internal refurbishment of crude oil pipes by extrusion/wiping will considerably postpone replacement costs.

As a result of continuous product development, we also have many other specific solutions that help customers become more efficient, reduce downtime, make application and maintenance easier, thereby reducing total operational costs.

## The Benefits



We have a long track record of partnering with the leading global pipeline refurbishment applicators for in situ pipeline refurbishment. The combination of our established partnerships, experience, and specialized technical support staff enables customers to extend pipeline lifetimes along with significantly reduced costs.

Customers can improve their operational profitability with the unique benefits of in situ application:

- Postpones the need for pipeline renewal
- Allows for a quick and cost-effective lifetime extension for existing pipelines.
- It can also be used for a change of liquid transportation (e.g. from oil to water).

Along with our innovative products, we go beyond the benefits of our coating systems and add further value by providing the best technical service and support in the market.

## The Result



Choosing in situ application with our *SIGMALINE* 415 coating for internal refurbishment of crude oil pipes by extrusion/wiping will help considerably save replacement costs. Indeed, case studies have shown that investments for in situ refurbishment paid back in 4 years, due to the enhanced flow properties (with up to 7% increase recorded after refurbishment).

Customers can be assured that, when it comes to highly specialized pipeline solutions, like the in situ application technique, we go further than other competitors in the market.

Our unrivaled experience and expertise in this field ensures that customers are satisfied by our ability to understand their needs and deliver the most efficient and effective solution for their specific project conditions.

## **CASE STUDY**