

Pertamina refinery unit V

SIGMASHIELD™ 880
rehabilitates an
offshore platform

Case study



The Customer

Pertamina Refinery Unit V

The Location

Balikpapan, Indonesia

The Challenge

The coastal environment, tidal zone, saltwater immersion

The Solution

PPG SIGMASHIELD 880 (yellow)

The Benefits

- Faster drying
 - Abrasion resistant
 - Single coat up to 1,000 µm (40 mils)
 - Surface tolerant
 - Continued cure underwater
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The Result

- Easy application – saves labor and time
 - Can be applied in challenging conditions
 - Protects under aggressive environments
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The Customer

The Pertamina (PERSERO) RU V is Pertamina's second largest refinery and is located in Balikpapan, Indonesia and began operations in 1984 producing gasoline and other petrochemical products. The refinery consists of two processing units: the primary unit and a catalytic reforming unit. Current production capacity is 260,000 barrels per day and supplies the eastern part of Indonesia.

The Challenge

Like many refineries, the Pertamina RU V has the challenge of protecting critical refinery infrastructure from the ravaging effects of a coastal environment and corrosion.

The weather and seawater exposure of the Pertamina fender mean that maintenance and painting crews have to work quickly and efficiently to remove the old coating and corrosion and begin repainting immediately. The labor and time necessary to maintain these assets demand that the coating has a durable service life.





The Solution

The SIGMASHIELD 880 coating was selected because of its abrasion-, corrosion- and seawater resistance, its faster drying time and its high film thickness in a single coat.

The tight spaces and convoluted geometry of the Pertamina fender structure required a coating that could be applied with ease and also reduce the time interval to recoating.

The SIGMASHIELD 880 coating was easily applied using airless spray and achieved the necessary thickness to provide durability in a single coat.

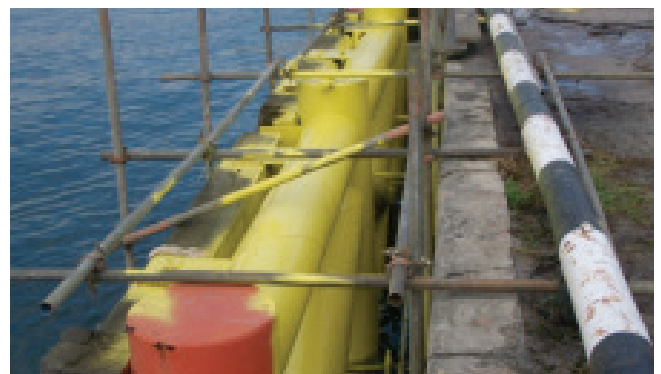


The Benefits

A rapid-drying, single coat of the SIGMASHIELD 880 coating was applied to a thickness of 500 microns (20 mils) on the fender JT at Pertamina RU V, saving labor and time while providing durability. The application of the coating went smoothly even at the elevated air temperature of 31°C (88°F) and provided enhanced corrosion-resistance properties.

The SIGMASHIELD 880 coating stood up to the splash and immersion effects of the salty waters in the Makassar Strait where Pertamina's RU V is located and showed substantial crack- and sag resistance even at high-film thickness.

In addition, the SIGMASHIELD 880 coating withstood tidal effects through its enhanced abrasion resistance, thus reducing the maintenance required on the structure.



The Result

The application of the SIGMASHIELD 880 coating was completed after blasting with silica sand to ISO Sa2 standards. Airless spray application of greater than 500 microns (20 mils) proved easier than with the competitor product and ensured long service life. The SIGMASHIELD 880 coating's excellent abrasion- and seawater resistance were evident in the fender condition after 15 months of service.



Top image: Initial condition

Middle image: Application

Bottom image: Inspection after 15 months