



SIKA AT WORK

REPAIR OF FIRE WATER CAISSONS, INDONESIA

OFFSHORE & MARINE CONSTRUCTION
CONVENTIONAL ENERGY

BUILDING TRUST



REPAIR OF FIRE WATER CAISSONS, INDONESIA



PROJECT DESCRIPTION

In 2016, Sika was engaged by Premier Oil Indonesia to carry out structural strengthening and corrosion protection of fire water caissons on the Anoa Platform in the Natuna Field. As part of a broader well integrity campaign, the client required a reliable repair method to extend the service life of these critical components, which are essential for platform safety systems.

The project involved encasing the caissons in high-performance cementitious grout to restore their structural integrity and prevent further corrosion damage, all executed without interrupting ongoing platform operations.

Project name: Repair of Fire Water Caissons, Indonesia
Client: Premier Oil Indonesia
Location: Natuna Field, Indonesia
Year: 2016
Application: Repair and maintenance
Product: A predecessor of SikaGrout®-9550

PROJECT REQUIREMENTS

The fire water caissons exhibited areas of external corrosion and perforation, posing a risk to structural reliability and fire safety functions. The client required a diverless, cold-work solution capable of reinforcing the caisson walls and providing a durable barrier against further corrosion.

The repair had to be executed in challenging offshore conditions, including monsoon weather, and required a method that could be safely implemented from below water level up to above water without compromising production.

Any product name or reference reflects the Sika product name at the time of creation of this document and may differ from the product name or reference during past events.

Our most current General Sales Conditions shall apply. Please consult the most current local Product Data Sheet prior to any use.



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SIKA SOLUTIONS

Sika delivered a comprehensive repair service that began with marine growth cleaning using an ultra-high-pressure water pump. Perforations identified at elevations -6.5 meters and -0.5 meters were sealed using inflatable bladders, which were later removed once grouting was complete.

The external grouting operation was performed from elevation -9 meters up to +4 meters using a custom-designed grout mould. Sika utilized a predecessor of SikaGrout®-9550, an ultra-high-performance cementitious (UHPC) grout known for its superior compressive and flexural strength – up to ten times that of standard concrete. The material's excellent bond and durability properties ensured effective encapsulation and protection of the caisson structure.

Despite adverse monsoon conditions, Sika's experienced offshore team adapted the work methodology, grouting the caissons in carefully planned stages to ensure project success.

CUSTOMER BENEFITS

Sika's diverless repair method enabled Premier Oil Indonesia to reinforce and protect critical fire water caissons without requiring hot work or causing any interruption to production. The application of Sika's proprietary UHPC grout provided exceptional structural strengthening and significantly improved resistance to future corrosion.

This approach not only restored the caissons' mechanical performance but effectively extended the service life of these essential safety systems, delivering a cost-effective and efficient solution in a challenging offshore environment.