



# SIKA AT WORK

## STRENGTHENING OF MARINE PILES AT TARUT BAY

OFFSHORE & MARINE CONSTRUCTION  
MARINE INFRASTRUCTURE

BUILDING TRUST



# STRENGTHENING OF MARINE PILES AT TARUT BAY



## PROJECT DESCRIPTION

In September 2014, Sika carried out structural strengthening and repair works on marine piles at Tarut Bay, Ras Tanura, Kingdom of Saudi Arabia. The brownfield project involved the rehabilitation of existing subsea support piles associated with live oil pipeline infrastructure operated by Saudi Aramco.

Sika worked in collaboration with Murjan Al-Sharq for Marine Services to execute a comprehensive pile strengthening program using high-performance cementitious grouting and clamp installation methods. A total of 36 marine piles were selected for structural repair and life extension works following detailed inspection and condition assessment.

Project name: Strengthening of Marine Piles at Tarut Bay  
Location: Tarut Bay, Ras Tanura, Kingdom of Saudi Arabia  
Year: 2014  
Customer: Murjan Al-Sharq for Marine Services  
Application: Repair and maintenance of piles  
Product: SikaGrout®-9550

## PROJECT REQUIREMENTS

The project required the structural reinstatement of severely corroded marine piles supporting live offshore pipeline infrastructure. Detailed inspection identified significant pile wall thinning, with some piles exhibiting severe deterioration within the splash zone.

Given the proximity to active oil pipelines, the repair methodology needed to eliminate the requirement for hot works while still providing reliable structural strengthening and long-term corrosion protection. The scope also required detailed engineering design, pile cleaning, clamp installation, annulus grouting, and corrosion mitigation measures to restore the integrity of the affected structures.

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.

## SIKA SOLUTIONS

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 delivered a complete structural strengthening solution encompassing engineering design, offshore repair execution, clamp installation, and high-performance grouting works.

The scope included detailed structural engineering assessments and clamp design, with clamp fabrication carried out locally in Saudi Arabia under Sika supervision. Internal and external pile cleaning operations were performed prior to repair works, including ultra-high-pressure water jet cleaning of infill piles and drilling of grout inlet holes to facilitate controlled grout placement.

The strengthening methodology combined infill grouting and clamp installation with annulus grouting using SikaGrout®-9550, a high-performance cementitious grout engineered for offshore structural repair applications. Additional repair activities included hole patching works and the application of STOPAQ corrosion protection systems to rehabilitated piles.

## CUSTOMER BENEFITS

The selected strengthening methodology enabled the repair and reinstatement of critical marine piles without the need for hot works in close proximity to live oil pipeline infrastructure, significantly reducing operational and safety risks.

The combination of clamp installation and high-performance grouting provided an effective long-term structural rehabilitation solution, extending the operational service life of the affected piles while minimizing disruption to ongoing operations.

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