



SIKA AT WORK

JETTY PILE REPAIR USING GROUTED CLAMPS, ALIAGA, TURKEY

OFFSHORE & MARINE CONSTRUCTION
CONVENTIONAL ENERGY

BUILDING TRUST



JETTY PILE REPAIR USING GROUTED CLAMPS, ALIAGA, TURKEY



PROJECT DESCRIPTION

Between July 2017 and February 2018, Sika was engaged by TSGI Mühendislik to carry out structural assessment and repair works on jetty piles located offshore Aliaga, Turkey. The project focused on restoring the integrity of 64 critical jetty piles that had been compromised due to degradation and wear over time.

The goal was to deliver a robust, engineered repair solution capable of transferring loads safely across weakened pile sections and extending the jetty's operational lifespan.

Project name: Jetty Pile Repair Using Grouted Clamps
Client: TSGI Mühendislik
Location: Aliaga, Offshore Turkey
Year: 2017-2018
Application: Repair and maintenance
Product: A predecessor of SikaGrout®-9550

PROJECT REQUIREMENTS

A detailed survey of the jetty piles identified structural deterioration in numerous locations, raising concerns over load-bearing capacity and long-term performance. The client required a precise engineering assessment followed by the design and implementation of a strengthening solution that would restore structural integrity without significant operational disruption.

Given the marine environment and the scale of the project, the repair methodology needed to deliver proven mechanical performance, cost efficiency, and long-term durability.

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 began the project with a thorough evaluation of the piles, performing SACs analysis to assess current structural conditions and load paths. Engineering teams designed customized grouted clamp solutions to encapsulate and reinforce the weakened sections of each pile. Fabrication of the clamps was subject to rigorous quality control checks to ensure compliance with both client specifications and offshore performance standards.

For the installation phase, Sika executed the placement of the grouted clamps around the compromised piles and performed annular grouting using a predecessor of SikaGrout®-9550, an ultra high-performance cementitious (UHPC) material renowned for its strength, durability, and excellent bond characteristics. A total of 190 metric tons of grout was used to complete the repairs.

Throughout the project, Sika prepared and managed all required documentation, including quality, health, safety, and environmental (QHSE) plans, risk assessments, method statements, and comprehensive reporting. This ensured full compliance with client requirements and local regulations.

CUSTOMER BENEFITS

Sika's engineered UHPC strengthening solutions enabled the safe requalification and life extension of the aging jetty structure in a cost-effective manner. By using Sika's proprietary UHPC grout for grouted clamp installations, the repairs delivered superior mechanical performance, excellent load transfer capabilities, and exceptional resistance to marine environmental conditions.

The project restored confidence in the structural reliability of the jetty piles, ensuring continued operational safety and performance for TSGI Mühendislik's offshore assets.

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