



SIKA AT WORK

XANAB-A SUPPLEMENTARY PILE GROUTING

OFFSHORE & MARINE CONSTRUCTION
CONVENTIONAL ENERGY

BUILDING TRUST



XANAB-A SUPPLEMENTARY PILE GROUTING



PROJECT DESCRIPTION

In December 2016, Sika completed offshore grouting works associated with the installation of a supplementary support structure for the existing XANAB-A platform located within the Litoral Field in the Gulf of Mexico.

The offshore works involved skirt pile sleeve annulus grouting for two skirt piles installed at approximately 30 meters water depth. The project was executed using a fully containerized reduced-footprint batching and grouting spread mobilized aboard DIAVAZ's Atlantic Challenger vessel. Sika was commissioned for the material supply and installation services by Constructora Subacuática Diavaz S.A. de C.V. on behalf of PEMEX.

Project name: XANAB-A Supplementary Pile Grouting
Location: Gulf of Mexico
Year: 2016
Customer: Constructora Subacuática Diavaz S.A. de C.V.
Application: Jacket installation
Product: SikaGrout®-9110

PROJECT REQUIREMENTS

The project required the offshore injection of approximately 15 metric tons of high-performance cementitious grout into two skirt pile sleeve annuli within a highly constrained offshore installation schedule.

The grouting operation needed to be completed within a single-day execution window while meeting demanding mechanical performance requirements, including a minimum 28-day compressive strength of 80 MPa and an early compressive strength of 50 MPa within 24 hours.

The installation methodology also required the placement of grout plugs prior to annulus filling together with reliable offshore grout injection and quality monitoring procedures suitable for subsea operations at approximately 30 meters water depth.

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SIKA SOLUTIONS

Sika supplied SikaGrout®-9110, a high-performance cementitious grout developed for offshore structural grouting applications requiring high early strength development, flowability, and long-term durability. The scope included provision of offshore grouting personnel, project management, QA/QC and HSE coordination, offshore grouting equipment, and complete offshore grouting execution services.

To facilitate offshore installation, the supplementary platform structure was preinstalled with a fixed grout line system. Prior to load-out, Sika installed subsea grouting ports to streamline the offshore grouting operations and improve execution efficiency during installation.

Flexible 2-inch grout hoses equipped with camlock coupling connections were utilized for grout injection into the jacket skirt piles. During the offshore operation, all grouting parameters were continuously monitored and recorded, including grout volumes, water addition rates, mixing and pumping durations, pumping pressures, and grout temperatures.

On-site early compressive strength testing of cube samples was carried out within Sika's mobile offshore testing laboratory, while additional 3-day, 7-day, and 28-day cube testing was performed by an independent third-party onshore laboratory to verify compliance with project specifications.

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CUSTOMER BENEFITS

SikaGrout®-9110 provided a ready-to-use cement-based dry blended grout solution capable of producing cohesive, highly flowable, non-shrink grout with excellent early-age strength development and long-term durability in offshore conditions.

The grout system enabled the project team to meet demanding compressive strength requirements within the constrained offshore installation schedule while maintaining reliable pumping and placement characteristics during subsea operations.

The versatility of the grout formulation also allowed project-specific performance requirements to be achieved efficiently, contributing to a successful offshore installation completed within the required execution window.

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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