SIKA AT WORK
CPRJ01 JACKET LEG STRENGTHENING PROGRAM, CHAMPION FIELD, BRUNEI

OFFSHORE & MARINE CONSTRUCTION
CONVENTIONAL ENERGY

BUILDING TRUST

CPRJ01 JACKET LEG STRENGTHENING PROGRAM, CHAMPION FIELD, BRUNEI

PROJECT DESCRIPTION

In May 2021, Sika was engaged by Brunei Shell Petroleum (BSP) to carry out structural strengthening and anti-corrosion protection for the CPRJ01 jacket legs in the Champion Field, offshore Brunei. The project was managed in collaboration with BSP's AER team and the ORMC construction team.

The scope focused on restoring the integrity of two jacket legs through infill grouting of the annular space from seabed to joint can level, followed by an external encasement in the splash zone. Sika's high-performance grout systems enabled a cold-work solution that avoided the need for welding and hot-work procedures, reducing both risk and offshore time.

Project name:	CPRJ01 Jacket Leg Strengthening Program
Location:	Champion Field, Offshore Brunei
Year:	2021
Application:	Repair and maintenance
Product:	SikaGrout®-9110, SikaGrout®-925, SikaGrout®-9010

PROJECT REQUIREMENTS

The client required a long-term strengthening solution that would eliminate the need for shutdown, allow for concurrent work activities, and withstand harsh offshore conditions. Given the presence of corrosion and structural wear, infill grouting was needed below the splash zone, while the exposed area required a protective encasement to extend the life of the structure.

SIKA SOLUTIONS

Sika supplied a tailored grouting solution comprising SikaGrout®-9110 and SikaGrout®-9010 binder lubrication mix. These ultra-high-performance materials were selected for their high bond strength, flowability, and durability in submerged and splash zone conditions.

In addition to supplying grout, Sika provided specially designed formwork, grout hoses with 40% contingency, quick-connect inlets/outlets, mixing and pumping equipment, certified rigging systems, and a dedicated offshore crew. Seat collars were fabricated to match the jacket leg geometry and installed to contain the grout.

Despite site-specific challenges including fluctuating tides, restricted deck space, COVID-19 measures, and working hour adjustments during Ramadhan, the team executed the work safely and efficiently. Grouting was completed entirely as a cold-work operation, with no hot-work required.

CUSTOMER BENEFITS

This was the first time BSP implemented a cold-work jacket leg repair at subsea and splash zone levels under the ORMC contract. The method allowed BSP to conduct critical structural work outside of scheduled shutdowns, saving valuable deferment time and costs.

The solution restored structural integrity and delivered permanent protection against corrosion while offering maximum flexibility under real-world site conditions. It also demonstrated that cold-work repairs using high-performance SikaGrout® systems can deliver substantial cost and time efficiencies over conventional hot-work methods.

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