



Type of work:

Well Integrity Services

Location:

Offshore Brunei

Client:

Brunei Shell Petroleum

Material:

Ultra High Performance Cementitious (UHPC) materials

**WELL INTEGRITY SERVICES
BSP 2015 CAMPAIGN**

DISCIPLINES:

- Subsea and Surface Facilities
- Offshore Contracting Services
- Conductor and Well Repair Services
- Grouting of Ageing Wells

Well inspections carried out by Brunei Shell Petroleum revealed that a significant number of wells were suffering from acute corrosion.

Nautec was commissioned to provide long term well integrity services to optimise and extend the service life of their existing wells.

SCOPE

- The scope of work included provision of cleaning and grouting equipment, offshore crew and UHPC material.
- The well integrity campaign is an ongoing project projected to complete in 2020.

CHALLENGES

- The Offshore campaign was carried out during the non-monsoon season from March to October, completing 49 wells during the 2015 campaign.

SERVICES

- The team removed the old cement and grouted all the ageing wells between the surface casing and the conductor using ultra high performance cementitious (UHPC) material.
- Grouting with UHPC, which has excellent bonding properties, stops the ingress of oxygen, which causes corrosion to steel structures and affects the well integrity.





UHPC, or Ultra High Performance Concrete and Composites are our business. We develop and produce UHPC products and we offer UHPC based solutions for multiple industries including the Renewable, Civil Construction, Ports, Offshore and Energy Industries.

We have documented the technical performance of our UHPC products through a large test program at MPA (Germany) which included creep and fatigue testing and we have carried out large-scale trials at low (European conditions) and high temperatures (Tropical conditions) to demonstrate the performance of our materials under severe weather conditions.

Our NaX® Premix Grouts are a portfolio of ultra high performance concrete and composites with strength and durability 10 times better than that of ordinary cement products.

CLIENT BENEFIT

- Using our high strength UHPC material with zero shrinkage, stops the corrosion and at the same time strengthens the overall structure.
- By using our zone 2 rated cleaning equipment, cleaning can be done without hot work permit. Our cleaning unit is a 3-in-1 combination of hydraulic jack hammer, high pressure water jet and power supply minimizing the equipment footprint and reducing the number of lifts.
- Assisting operators to manage and restore well integrity with proven and cost-effective grouting solutions ensures sustainable corrosion protection with no interruption in production.

