



NauticAWT recently provided the strengthening method to repair corroded surface casings of well heads at a platform offshore Sarawak. Upon the visual inspection of one of Shell's platforms, 2 wells were found to be corroded and immediate measures were taken to arrest further corrosion and repair the damaged areas of the well conductors and structural casings of the platform.

**NauticAWT
Disciplines:**

Offshore Contracting
Services

Well Integrity Solutions

Annulus Grouting



Location:
Offshore Sarawak,
East Malaysia

Client:
Sarawak Shell
Berhad

Materials:
NaX™ Q140,
4 tons

Project Dates:
June-July 2017



The Scope

- Provision of strengthening method to repair the corroded surface casing of wellhead.

The Services

- Pre-job visual inspection of the 2 well conductors and structural casings to determine the level of existing concrete, rust, perforations and blockages of the annulus.
- Breaking and removing existing concrete inside the annulus prior to grouting.
- Provision of all materials, equipment and accessories required to carry out the strengthening of the wellhead casing.
- Provision of engineer and offshore crew to perform the installation of rebars, mould sections and grouting services.
- Grouting of wellhead annulus using NaX™ Q140 Ultra High Performance Cementitious (UHPC) materials.
- Grout Strength Verification using accredited 3rd party laboratory.

Client Benefit

- NauticAWT uses its proprietary NaX™ UHPC materials to carry out its subsea repair and strengthening applications. The materials are composed of selected blends of silica sand and special high performance aggregates with an optimised grading. In combination with NauticAWT's advance binder technology based on nanotechnology the NaX™ products have obtained unique performance qualities.
- The unique material technology gives ultra high dense materials with results in materials with extreme low permeability and thereby high resistance to ingress of chlorides, sulphate and other types of chemical degradation. NaX™ materials dense nanostructure further more reveals a series of unique mechanical behaviour such as extreme high compressive and flexural strength, up to 10 times stronger than normal concrete, and an E-modulus of more than 60 GPa.
- In general cementitious materials shrink over time, which can result in reduced or no adhesion to a steel structure. In order to overcome this issue all NaX™ materials have been shrinkages compensated and have a long-time unique high adhesion to steel. This is essential in connection with structural repair solutions.