



**Type of work:**

Installation services

**Location:**

Vasai East Field, Heera-Panna-Bassein block of Mumbai Offshore

**Materials:**

Nax® Q80 High Performance grout

**Project Dates:**

2016 - 61 days total

**GROUTING SERVICES FOR  
ADDITIONAL DEVELOPMENT  
OF VASAI EAST PROJECT**

**DISCIPLINES:**

- Offshore Contracting Services
- Grouting Services for Installation of Subsea Structures

Nautec has completed its grouting contract for the installation phase of 2 new four legged fixed jacket platforms (VSEB and VSEC), as well as the installation of crossing and free span pipeline support, which are located at the Vasai East Field in India.

**CLIENT**

- Main Contractor: L&T Sapura Offshore Private Limited.
- End Client: Oil and Natural Gas Corporation (ONGC).

**SCOPE**

- All documentations, materials, equipment, grouting supervisors and technicians associated with the grouting works.
- Pre-installation supplies and services i.e. front-end documents; supply and delivery of grouting materials; mobilisation of offshore spread, laboratory and crew; engineering support for pipeline crossing support and free span work.
- Post-installation supplies and services i.e. submission of all documents associated with the closing of the project; demob of equipment, lab and crew; on-site Quality Monitoring Reports; Daily Operation Reports (DOR); on-site and 3rd party, independent lab - crush testing of HPC materials.





**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.

## SERVICES

- Grouting for main legs and skirt pile sleeves of VSEB and VSEC Jackets at 42.2m and 46.5m water depths.
- Grouting for pipeline crossing support and free-span rectification works with pipeline support installation taking place at 42.2m and 53.6m respectively.

## CHALLENGES

- The installation and support grouting services were taking place subsea at 42 to 54 meters water depths, which required a diving team and use of Dive Support Vessel (DSV) SK900.

## CLIENT BENEFITS

- Getting minimum required compressive strength within a short period of time helps install the jacket topside as soon as the jacket leg and skirt pile sleeve grouting work has been completed. With the Rapid Strength development properties of NaX® Q80 the client managed to install the jacket topside in less than 18 hours after the jacket leg and skirt pile grouting services were completed.
- The NaX® Q80 setting time is tremendously shorter than that of ordinary cement. In pipeline support grouting work, the raised pipeline can be lowered down once grout setting time has been achieved. During this project, the raised pipeline was lowered down within 6 hours after completion of grouting, which helped accelerate the overall support bag installation process at the pipeline crossing.

