ceEntek

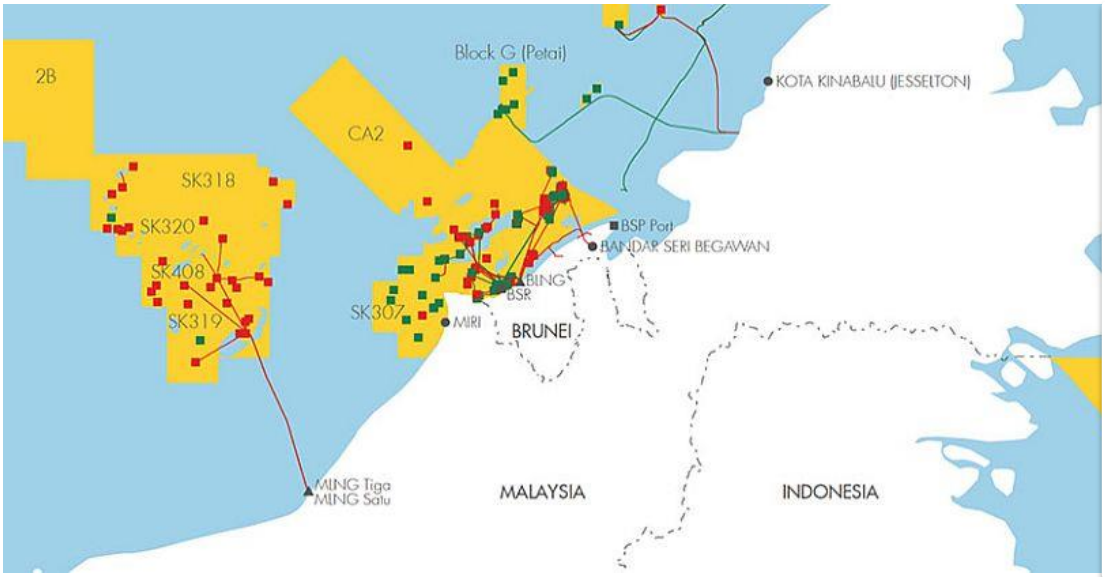
PROJECT NAME: OFFSHORE JACKET GROUTING

Photo: Offshore Delivery Team conducting mixing operations

Location: Offshore East Malaysia
Client: Neptune Subsea
Product: ceEntek ce200-120G-R™

Product Volume: 16.1 m^3 (57.5 Te)
Connection Size: 21.34cmx5.5cm; 22.86cmx2.5cm (Skirt Pile)
Completion Date: August 2019

PROJECT SITE



The offshore site location is in the Gorek Development Field, located in East Malaysian waters with the water depth ranging between 80m to 90m.

Photo: Overall Field Schematic – Drawing courtesy of Energy Global News

PROJECT PROFILE

POJECT DESCRIPTION

Neptune Subsea was awarded the engineering and supply of the grouting services for the SSB Jacket installation. UHPC grouting operation was required for the piles driven during jacket installation, whereby the annulus between the skirt piles and jacket legs had to be fully grouted. The grout operation had to be performed by conventional grouting method of pumping offshore into skirt pile sleeve annuli for this scope of work. The unique and challenging client requirements for this project specified that an early strength UHPC-type grout capable of achieving compressive strengths of 13MPa at 6 hours, with an excess of 55MPa at 28 days had to be used for this job. Neptune selected ceEntek's rapid strength development ce200-120G-R^{TM} grout due to its unique early highstrength characteristics.

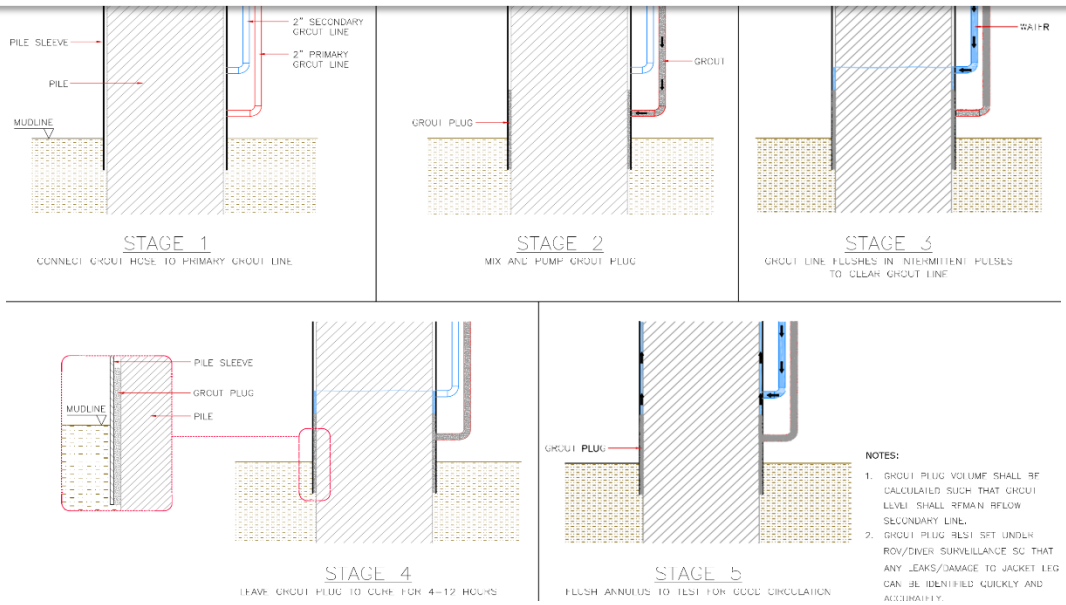


Photo: Grout Plug Story Board (courtesy of Neptune)

PROJECT EXECUTION

ceEntek's ce200-120G-R^{TM} UHPC grout has been tested at an Admaterials certified lab to ensure that it can comply with the project's early compressive strength requirement to receive client's acceptance. The Admaterials lab certified that ce200-120G-R^{TM} UHPC grout fulfilled the compressive strength requirements and achieved average strength in excess of 60Mpa at 24 hours. The grout was supplied in 2205lb (1000kg) bulk-bags and batched in the twin planetary mixer located on the offshore vessel. The grout was mixed and pumped offshore into skirt pile sleeve annuli (see photo above). The 75mm cubes were sampled throughout the operation and tested at an on-shore lab for quality reporting.

Photo: Batching ce200-120G-R^{TM} with Neptune Subsea's 1m^3 dual Electric Planetary Mixer powered by 18.5kW motors