

Spider 2000

Ormen Lange, Norwegian Sea

Challenge

The Ormen Lange gas field required more than 100 km of subsea pipelines to be installed across the steep Storegga Slide in water depths of up to 900 m.

To reduce unsupported pipeline spans, trenches had to be excavated through extremely hard over-consolidated clay exceeding 200 kPa while maintaining stability on slopes steeper than 30°. Conventional trenching methods could not operate under these conditions.



Spider 2000 subsea crawler



Spider 2000 subsea crawler

Solution

SediCon developed, designed and built the remotely operated Spider 2000 subsea crawler in cooperation with GTO Subsea. The patented system combines hydro suction and jetting technology to excavate hard cohesive clay while operating on steep subsea terrain without relying on underwater visibility.

Designed for water depths of up to 2,000 m, Spider 2000 successfully completed the pipeline trenching campaign for the Ormen Lange development.



Project Location

Project facts

Client: GTO Subsea AS / Nexans AS
End client: Norsk Hydro ASA
Project: Ormen Lange Pipeline Trenching
Location: Norwegian Sea
Water depth: 300–900 m
Crawler capability: 2,000 m

Results and benefits

- Pipeline trench successfully completed
- Operated on slopes >30°
- Excavated >200 kPa clay
- Remote subsea operation
- Patented jetting & suction system
- Engineering Achievement nominee (2006)

SediCon develops innovative sediment handling solutions for offshore and specialized subsea applications.

For more than 30 years, SediCon has developed and supplied proprietary sediment handling technologies from Trondheim, Norway. Our solutions for reservoirs, intakes, desanders and tunnels have been successfully implemented in hydropower projects in more than 20 countries across five continents.