



Type of work:
Offshore Wind Energy

Location:
Taiwan Strait, Taiwan

Materials used:
MT 12,440 bulk supplied MasterFlow 9800

Client:
Boskalis Offshore International / Changfang and Xidao Offshore Wind Project

Project date:
May – Aug 2023

Number of foundations grouted:
52

Grouting operation:
47 days

**CHANGFANG AND XIDAO
OFFSHORE WIND FARM
CAMPAIGN 2, TAIWAN**

DISCIPLINES:

- Project Management
- Material Supply
- Grouting Services



The Changfang and Xidao Offshore Wind Farm is a 589MW offshore wind farm project in Taiwan developed by Copenhagen Infrastructure Partners. This new wind farm has the capacity to power 650,000 Taiwanese households with renewable energy.

Boskalis were responsible for the transport and installation of the WTG foundations, which consist of three pre-driven piles onto which a jacket was installed. The water depth ranges between 25m and 40m. Campaign 2 consisted of 52 foundations with the installation campaign taking place between April – August 2023.

JOB SCOPE

Supply of MasterFlow 9800 and grouting services for 52 WTG Jacket foundations for Campaign 2 of Changfang and Xidao Offshore Wind Farm.

SERVICES

Boskalis transported and installed the WTG jacket foundations in water depths ranging between 25 - 40 m.

Between 2021 - 2022, we supplied more than 3,400 tonnes of MasterFlow 9800 for campaign 1.

MasterFlow 9800 was used in the structural connection between the pre-driven piles and WTG jacket foundation.

In 2023, we fast-tracked the material and application services for 52 jacket foundations by delivering a turnkey solution consisting of both onshore and offshore project management, supply of 12,440 tonnes of MasterFlow 9800, offshore grouting equipment, experienced personnel, offshore QAQC and 28-day onshore cube testing of specimens at an approved third-party laboratory.



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[®] and MasterFlow 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.



CHALLENGES

Due to the unpredictable weather and lack of subsea visibility at the project site location, a short installation campaign was envisaged by the customer between April to August 2023. MBS/Nautech was required to supply and apply 12,440 MT in quick succession and offered our bulk product solution MasterFlow 9800 and state-of-the-art mixing technology to apply our product to the highest quality.

SOLUTIONS

We provided the customer with best-in-class product and mixing technology to meet the high demands of the project installation schedule and applied 12,440 MT to 52 jacket structures in just 47 offshore grouting days. The fastest grouting operation recorded during the campaign was up to 45m³/hr.

PROJECT PERFORMANCE

- Our supply of groundbreaking offshore grout mixing technology and experienced crew made the fast tracked delivery of this programme possible.
- All offshore deliverables were successfully achieved resulting in an efficient and high quality application of MasterFlow 9800 in Taiwan.
- Progress was such that 28 jackets were installed within one calendar month.

CLIENT TESTIMONIAL

“The knowledge and client focus of MBS in providing Masterflow 9800 to their customers, made us request them a turnkey solution covering supply, application and quality control of the same product. And this very much to our satisfaction as the short communication lines, open attitude to approach us as a customer and drive to perform, lead to a project execution with very high output and very good quality application. This allowed us to complete the project ahead of schedule with the full satisfaction of our end customer.”

*Mr. Edward Meevers Scholte
Sr. Project Manager, Boskalis Offshore International*