

# CASE STUDY



## Boskalis – Integrated Air Hose and Reeler System

### CUSTOMER

Boskalis International

### LOCATION

Xidao Offshore Wind Farm, Taiwan

### CUSTOMER REQUIREMENT

An integrated air hose and electric powered reeler system solution to supply compressed air to a bubble curtain, noise mitigation system.

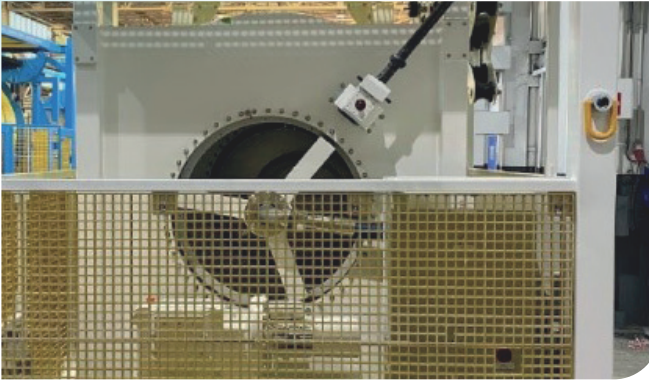
### HYDRASUN SOLUTION

The design of an integrated umbilical and reel solution with a bespoke quick disconnect mechanism to ensure more safe and reliable installation.

### BENEFITS

- Specification Guidance
- Integrated Solution
- Project Management
- Short Delivery Times





## BACKGROUND

Noise mitigation systems or alternative low-noise installation technology is required during offshore wind foundation installation. This is key to ensuring noise emissions do not have a detrimental effect on the marine environment. Installation contractors are responsible for ensuring that noise emissions are mitigated during pile driving operations to minimise the impact on aquatic life, this being a regulatory requirement in some regions.

The use of bubble curtains to significantly reduce noise is a proven technology, the bubble curtain is placed around the pile and compressed air is pumped from a vessel to the seabed creating a curtain of free rising bubbles which created a noise barrier around the emission source.

## CUSTOMER REQUIREMENT

Boskalis International are a global dredging and marine services contractor who specialise in the planning and installation of offshore wind farms.

Boskalis International were looking for an air hose and reeler system to supply compressed air to the noise mitigation system on the seabed for the Xidao Offshore Wind Farm in Taiwan. Boskalis International and Hwa Chi Construction Co. Ltd consortium had been awarded the installation scope to install 62 jacket foundations and 186 pin piles for the project.

## HYDRASUN'S SOLUTION

Hydrasun proposed a rigid air hose to ensure the wall of the hose would not collapse if the compressed air pressure was to drop completely. The tensile strength of the hose was a key consideration during specification due to the constant tension it is under during operation. The hose was supplied in a long single length to ensure the vessel could remain a safe distance from the pile installation contractor's vessel and operation. The solution also incorporated a quick disconnect safety feature on the finished assembly to allow for a rapid efficient abandonment should the vessel have to move away from the piling operation at short notice due to unforeseen circumstances.

The integrated solution also incorporated a bend restrictor to protect the air hose from potential abrasion risk.

The client opted for an electric powered reeler system, which included a "live" swivel design to ensure constant tension during the reeling operation.

## THE RESULT

Hydrasun were able to work alongside Boskalis to design a bespoke solution that ensured a safe and efficient integrated solution.

Hydrasun delivered this project on time and within budget.

### Group Headquarters

Gateway Business Park  
Moss Road  
Aberdeen  
AB12 3GQ

Tel: +44 (0)1224 618618  
Email: [info@hydrasun.com](mailto:info@hydrasun.com)

[www.hydrasun.com](http://www.hydrasun.com)

