

## CASE STUDY: ACOUSTIC FISH DETERRENT

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Hydro Group designs and engineers innovative connectivity solutions for oceanographic and aquaculture industry applications. These projects are often highly specialised, allowing our specialist subsidiaries Hydrocable Systems and Hydro Bond Engineering to create a total connectivity solution for our customers.

### PROJECT

Our client, one of the UK's largest energy providers, required a cable and connectors to power an acoustic fish deterrent system. This project would supply power and signal to eight speakers situated underwater to prevent fish from coming too close to the station's cooling water intake.

It was imperative that the cable have a design life of over 10 years when submerged in sea water to a depth of 15 metres. The cable would also have to be flexible enough to bend through 90 degrees and have a high level of mechanical or armoured protection. Rugged connectors and a subsea junction box would also be required to deliver power effectively to the setup.

### SOLUTION

Given the complexities of the order, Hydrocable Systems devised two 135m lengths of CS 6086; a 37.6 Overall Diameter (OD) cable with 18 cores and Polyurethane (PU) bedding, inner and outer sheaths. This cable has a voltage rating of 1.2 kV AC. This design incorporates a Vectran fibre braid with a minimum breaking load of 2268kg and galvanised steel wire braid, making it extremely resistant to chafing or physical damage. A UV stabiliser has been applied to ensure the PU sheathing does not crack or degrade in sunlight.

For the cable's terminations, sister company Hydro Bond Engineering supplied two of its durable Hydro Rubber Sealing (HRS) 208-24S cable mount connectors in Stainless Steel. Two HRS408-24P/SS-01M bulkhead mounts were also provided alongside a 24-pin male receptacle and junction box with internal breakout moulding. These items facilitated the connection of third-party connectors and locking sleeves to fully integrate the solution with the customer's existing technologies and in the preferred location. The design of the junction box is as such that it can be easily disconnected and re-connected or rerouted as required.



### **BENEFITS**

The customer was able to quickly restore their acoustic fish deterrent capability with this package, after suffering a previous failure with a different manufacturer's cable. The client received a cost-effective solution with a long service life and technologies which have been proven for over 30 years.

To discuss your connectivity requirements please contact [sales@hydrogroup.plc.uk](mailto:sales@hydrogroup.plc.uk).