

Wave Energy Generator Load Cell

Industry: Energy

Summary

Customer Need / Challenge

A scientist has been tasked to create electricity by using the energy that is generated by ocean waves.

Interface Solution

As electricity is generated by ocean waves, an Interface load cell will measure tether line tension using a submersible 3200 Hermetically Sealed LowProfile® Precision Stainless Load Cell. The mooring line was attached to the load cell base and the platform generator was connected to the load cell hub. This measured the forces that were generated by the ocean waves and data was later analyzed by the customer's Data Acquisition System (DAQ).

Results

Scientists used force data to make adjustments to tether line. Also, if tether line breaks free, the scientist can be notified immediately to reattach the tether line.

Materials

- 3200 Hermetically Sealed LowProfile® Precision Stainless Load Cell.
- CLV-101 Heat Treated Steel Clevis.

How It Works

1. 3200 Hermetically Sealed LowProfile® Precision Stainless Load Cell is connected between a mooring line on the sea floor and a wave energy generator platform.
2. Load cell cable is connected to customer's DAQ.
3. As electricity is generated by ocean waves, force readings from load cell are recorded in the DAQ.
4. Results are analyzed by a scientist and adjustments to the tether line are made accordingly.

