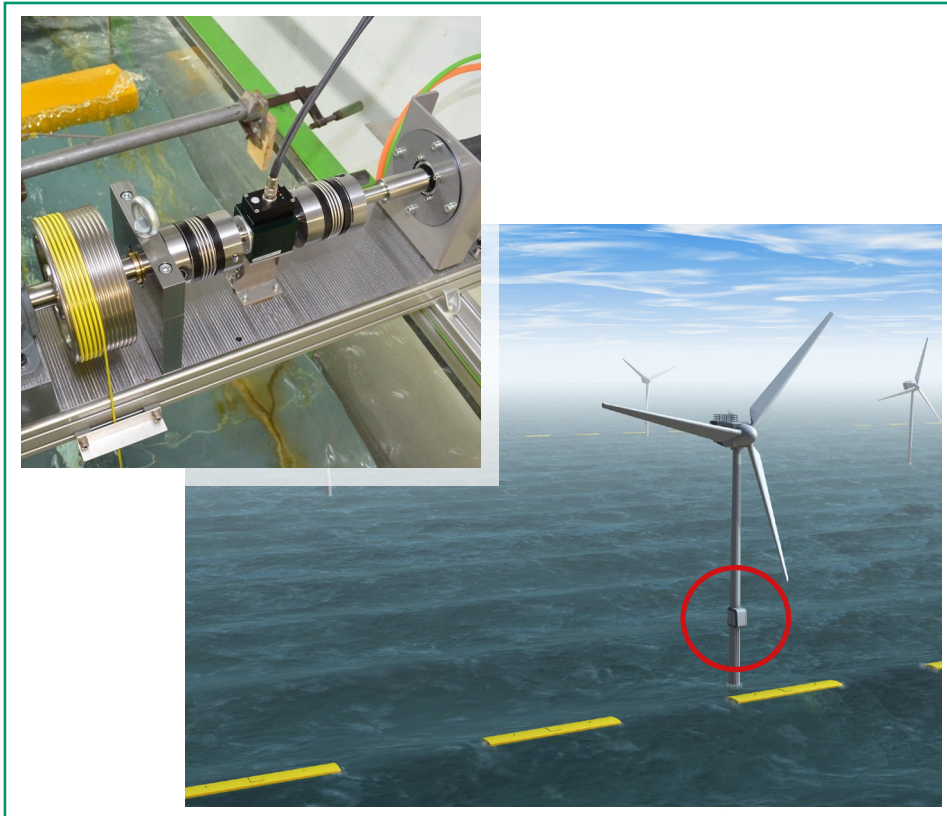


Torque measurements in an innovative technique for efficient energy generation



Contact

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Sector

- Renewable energy

Product name

- Torque sensor

Features

- High measurement accuracy
- Rugged design
- Zero-maintenance operation
- Optical signal transmission
- Bidirectional torque measurement

Task

Waves produce movement of an elongated drive unit, secured by three cables to the seabed, which then transfers mechanical energy via a cable to a generator, which is mounted on a wind turbine tower and shielded from seawater.

The latest development work is focussed on float trajectory and control strategy, with designs achieving up to 80 % utilization of the incoming wave energy for driving electric generators.

Specific Requirement

- Extremely stable over time
- Excellent reproducibility
- Compact torque sensor
- Capable of operating under wide-ranging power conditions to accommodate potential fluctuations in the supply voltage

Solution

The 8661 torque sensor is permanently mounted between two couplings. These couplings are designed to correct vertical and angular misalignments and differences in length. The torque and speed measurements are available as analog or TTL signals for further processing. In addition, the optional USB interface can be used for digital analysis of the measurement data.

