

# **WINDTM**<sup>™</sup>

### **Torque Monitoring System**

#### Don't take our word for it, test it on YOUR turbine!

AeroTorque offers a proprietary system to accurately monitor the torque on your turbine's drive train. The WindTM<sup>™</sup> Torque Monitoring System mounts to your main shaft viahigh powered magnets, allowing for quick mounting ofhardware, with less downtime.

The system has the capability of measuring and storing the largest torque events including spikes, reversals and oscillations.

A second channel is utilized for shaft speed to allow for an accurate gauge of ambient conditions at the turbine at time of an event.

Data is retrieved over a wireless Bluetooth connection and is accessed remotely over cellular networks or by removable data card.

This system, when combined with the WindTC<sup>™</sup> torque control, allows for a better understanding of real-world torque and after the effectiveness of our solution.



Installation of strain gauges - installs quickly



Completed mounting - ready for startup

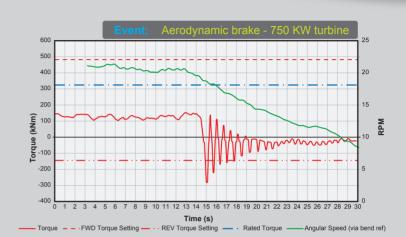


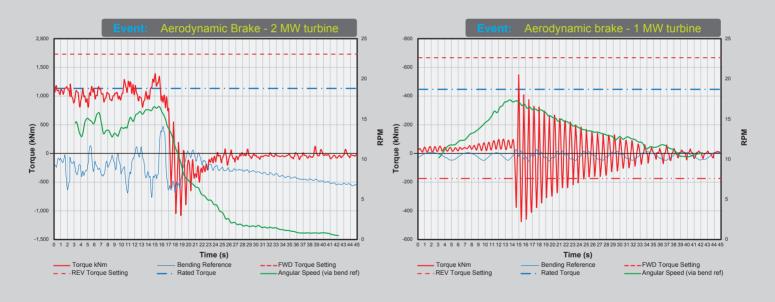
Shown with optional extra battery pack

AERO/TORQUE

### WINDTM<sup>™</sup> Actual Results From Real-World Testing:

This graph shows the torque reversals on a shaft during an aero-braking event and the rotational speed of the shaft.

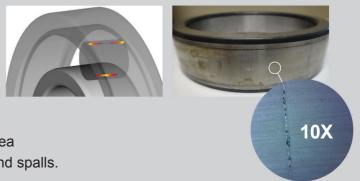




## The Link Between Impact Loads and Axial Cracking

Impact loading on the skewed rollers creates high stress and high strain rates just below the surface of the inner raceway.

These impacts can create super hard white etch area (WEA) inclusions that will propagate axial cracks and spalls.



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