Pressure Sensors Ensure Accuracy of Windmills

Wind energy offers an environmental friendly fuel alternative to fossil fuel-generated electricity. Windmills are required to convert this “green” energy of the wind into electricity. Because of the remote location of many windmills, sensors serve as critical components in their operation, maintenance and safety. Pressure sensors monitor yaw brake, lubrication oil, cooling circuit pressure, and level in gear boxes. Differential pressure sensors monitor filter conditions. As a hydraulic filter becomes clogged, the output signal increases, notifying the controller to replace the filter.

As windmills are located in deserts, coastal areas and mountain tops; operating temperatures can range from -50 to 60°C. In addition, windmills are subject to salt, mist and fog, a leading form of corrosion. Instrumentation used to monitor the operating conditions for the windmill, therefore, needs to survive in severe conditions while offering reliability and trouble-free service.

Pressure sensors, differential pressure sensors and pressure-temperature sensors from American Sensor Technologies (www.astsensors.com [1]) are ideal for windmill applications. In addition to being rugged, AST pressure sensors operate over wide ranges of temperature and environments, from deserts to coastal plains.

• AST 4000 Pressure Sensors offers high proof and burst ratings with excellent EMC protection.

• AST5400 Pressure Sensors offer filter condition monitoring with linear and accurate readings.

• AST20HA Pressure Sensors offer both pressure and temperature readings from one device, reducing process penetrations in the hydraulic system.

• AST4510 Pressure Sensors measures the level of an oil reservoir while offering temperature output as an option. Maintaining and monitoring the level of oil is critical to maintain smooth supply of power from the windmill.

For more information on the application of wind energy pressure sensors, please refer to: http://www.astsensors.com/application/pressure/wind-energy-pressure-sensors.php [2]

For more information on the operation specifications of these and ther AST pressure sensors, please refer to the web site at http://www.astsensors.com/pressure-sensor-products.php [3] or contact the factory at sales@astsensors.com [4].

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