Non-contact torque sensor now mounts in moments



The latest model of TorqSense, the non-contact digital torque measuring system, incorporates an integral sprocket or pulley, allowing easy fit-and-forget mounting in a vast range of plant and machinery such as drum mixers, generators, pump, dynamometers and conveyor drives.

Earlier models of TorqSense provided an in-line shaft for connection to the equipment under test. While these are suitable for many situations, sometimes mean a degree of engineering was necessary to mount the unit. This prompted torque system manufacturers Sensor Technology, of Banbury, to develop this new user-friendly series of models.

The new RWT 350/360 TorqSense is suitable for virtually any plant driven by a belt or chain drive, particularly those where space is limited or access restricted. The ease of fitting is also likely to be of interest for jobs where it is essential to minimise downtime, such as in continuous process plant.

"Belt and chain drives naturally have a high radial load, which has to be accounted for when mounting a standard TorqSense," explains Tony Ingham of Sensor Technology. "It's not rocket science, but it can be fiddly, especially if access is physically difficult or time is limited.

"The new RWT350/360 simply replaces an existing pulley/sprocket, and can be fitted in minutes and automatically compensates for the radial load. It's little more than tighten up a few Allen screws and checking alignment."

To aid mounting in tight spaces, the RWT350/360 has its control electronics separate from the sensing head, similar to the RWT330/340 series introduced by Sensor Technology last year. This means that the head can be located in very small spaces, while the electronics are mounted at a convenient distance via a dedicated cable. This configuration is also useful for situations where electronics may be more environmentally situated elsewhere.

TorqSense uses tiny piezo-ceramic combs, known as Surface Acoustic Wave (SAW) devices fixed to a purpose designed flange. These distort in proportion to the instantaneous torque level. The distortion creates RF data signals that are transmitted via a non-contact radio frequency coupling rather than by conventional but clumsy slip rings, or high inertia rotary transformers.

This data signal in turn is transmitted to the control unit, from which it can be read on an alpha-numeric display or transferred to a PC for storage and analysis using the TorqView software programme.

"Our larger sensors are used in many applications at the heavy duty end of industry, whereas our smaller ones are found in applications such as fine chemical dosing and lab-based research," says Tony. "Right through this spectrum are applications where mounting is associated with a belt or chain drive. And the new RWT350/360 makes this a simple plug-and-play operation. It's an issue that we have become more aware of as the popularity of TorqSense has grown. "

"Our growing band of TorqSense users love the reliability of collecting high speed real-time digital torque data and TorqView's instant display and analysis makes it a less onerous task, plus we can now say that fitting is also a pleasure."

For more information:

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