

## Application solution

### Printing and publishing

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#### Monitored machinery

The folding machine at a major East coast newspaper publisher is fed from ten separate press lines. It can fold up to 1,000 sections per minute. The folding arm swings on each folding operation and is mounted on a planetary gearbox. When that gearbox bearing fails it often seizes and shuts down the folding operation. It has cost up to \$150,000 for repairs after one of these failures. A scheduled re-build of a folding machine costs \$15,000. The machinery required monitoring solutions for high temperature atmospheres for comprehensive machinery data.

#### Sensor solutions

Wilcoxon's 797T-1 dual vibration and acceleration sensors are used to monitor the temperature and vibration on bearings. Wilcoxon 793 series accelerometers are used where only acceleration measurements are needed. The vibration analyst for this leading newspaper says, "The planetary gearbox and bearing are the heart of the folding machine, so monitoring that area would be ideal, but it moves too fast. Installing the 797T-1 and the 793 accelerometers on the center spine bearing housing gets us close enough."

The 797T-1 measures vibration and temperature to diagnose overheating, misalignment, unbalance, and bearing wear. The results have been so positive they are installing additional Wilcoxon vibration sensors at press operations in three other cities.

#### Benefits

- Planetary gearbox condition can be assessed readily, yielding "peace of mind"
- High documented return on investment (ROI) for predictive maintenance program
- Unscheduled rebuilds are avoided, saving 10 to 100 times the sensor cost
- Reliable folding machine operating schedule