



EXTRA! EXTRA! READ ALL ABOUT IT! MONITORING TENSION ON A NEWSPAPER PRESS

www.dfe.com controlling process tension

A major metropolitan publisher in North America prints a large circulation daily newspaper on six offset web presses with twelve print stations per press. The newspaper presses handle web widths of between 1260 and 1680mm and print at speeds up to 85,000 cph (copies per hour).



In order to maximize its profitability and productivity, the press operation had to deliver fast output and repeatable quality while minimizing waste. The problem for these multi-web presses was maintaining consistent registration and reducing the potential for web breaks, which, even occurring infrequently, caused costly downtime and scrap.

The solution began by DFE and the customer identifying the critical locations in the process where tension could be measured. The single best location for tension sensing in the print stations was then determined.

With the large number of print stations to outfit in the press room, the customer decided to install only one tension measurement roll per station to start. Because the registration problem was occurring in just one zone of the press, this phased approach made sense. More tension zones in each print station could be retrofitted later with equipment for finer control.



Model C tension transducers

One of DFE's most popular tension transducers, the **Model C**, size 2, dead-shaft version with screw-mount was chosen to be installed, in pairs, on the designated idler roll of each print station.

The excitation voltage needed for each transducer pair was provided by the **TrueTension™ model TI-17A** indicator, which was also used to process the tension signal from the transducers and output an isolated 0-10 volt signal. The signal outputs from the TI-17A indicators were connected to a PLC for monitoring tension.



TI-17A with mounting bracket and legend plate

Seventy-two Model C transducer pairs with model TI-17A tension indicators were installed on the presses—one setup per selected zone per print station. Now tension is easily monitored from each press' control room.

Manual tension adjustments are made on the press when tension variations exceed acceptable limits. Registration has improved substantially, and web breaks have been virtually eliminated.

Web process deviations usually end up having a negative effect on productivity and product quality. By reducing scrap and allowing the press to run at high speeds with defect-free output, well-managed web tension will improve the press' bottom line performance.

The initial investment in Dover Flexo measurement and control equipment, which is low compared to other capital expenditures, is often returned in as little as a few weeks.

09/07/00 319appNewsPress.doc