



DT301 pulp and paper application success

One of the potential markets for SMAR's DT in Sweden is in the pulp and paper industry. The Stora Enso plant, located in Nymölla, south of Sweden, is a facility that handles the entire process, from preparation of pulp through to the end product of fine paper. They are the first customer in the Scandinavian countries to discover the advantages of our DT.

For pulp treatment, they use a sulphite boiler and measure liquors in several places in the production. Previously, they used the same concept of differential pressure, but measured with a pressure transmitter.

The differential pressure transmitter has the high side on one point of a heat exchanger and the low on the other point. There is no temperature compensation. To prevent blocking of the capillaries tubes to the transmitter, they required a constant purge of water in the process. However, black liquor still created blockage in the tubes and a signal error in the density reading.

Utilizing the DT, they now save 180 kg per hour of steam. The total cost savings in lower steam consumption over the course of a year is estimated to US\$16,000. Stora Enso realized that the accuracy of the DT is much higher and they can now get a signal directly in Baumé, which was previously estimated. Overall, they have higher performance in the process, improved control of the



Customer's final product

quality and significant financial savings.

The production was running in a cycle of 8 hours production and 8 hours of cleaning with condensate. With implementation of the DT, they expect to cut production time spent with the cleaning process and in addition, save costs associated with the increased cycle of productivity hours.

The application experience with the DT was so successful that Stora Enso then placed an additional order for 4 units on Beving Elektronik, the Swedish representative. To summarize the DT benefits realized in pulp and paper applications:

- Significant reduction of steam consumption costs. Investment return estimated at 1 to 2 years.
- Higher accuracy in the density measurement, as evidenced directly in the production process.
- Production control is more accurate, faster and reliable. When using a pressure transmitter, tubing was occasionally blocked but normal readings continued and no errors were detected. Blockage was detected only when the cleaning process was initiated.



DT301 installed at Stora Enso-Sweden

Complete verification was then required for production amounts prior to cleaning.