

Consistency

Control of a Broke Pulper



Background

The Stora Enso Fors mill in Sweden is producing coated cartonboard based on locally produced CTMP and bought bleached kraft. Rejected board is recycled to the process using a guillotine pulper where the rolls are cut, then disintegrated in water during mixing and recirculation. The pulp consistency is measured in the pipe after the pump and controlled to 3 %. The tough environment with extreme vibrations has caused problems, both with broken weld connections and broken electronics. After failing with standard types optical sensors, a discussion with Cerlic to find a solution started. The close cooperation led to the development of a new version of our standard CTXIL20/70 sensor. The objective was to reduce the physical dimensions and weight as well as separating the electronics from the extreme vibrations. By moving the electronics to a separate box, the objectives were achieved and the new sensor (CTXIL20/70-SE) is operating in the Fors mill since the spring of 2004.

Application

For controlling the consistency from the guillotine pulper, the Cerlic CTXIL20/70-SE sensor is installed on the pipe after the pump. The sensor signals are transferred to the electronic box which is mounted on vibration free location. The consistency controller is operating the dilution water flow to the pulper.

Results

The consistency sensor has eliminated the earlier problems caused by extreme vibrations. With the high sensor uptime, the consistency control of the broke pulper is made in a satisfactory way. The advantages with the Cerlic consistency sensor are:

- The low mass sensor head minimizes the force on the welding of the installation flange
- The electronics is separated from the sensor head, for vibrational free installation
- Robust sensor head without moving parts, minimizing the need of maintenance

