Delignification is the process by which the majority of lignin is removed from paper pulp. Oxygen is used to ensure a less damaging effect on the plant and surrounding environment than more aggressive chemical methods. In the bleach plant, the remaining lignin is removed by stronger chemical means, and any residual color is removed by chemical oxidation to attain the desired brightness. Dedicated, robust instrumentation and advanced control are required to achieve this efficiently.
**Parameter** | **Why measure this parameter?** | **Why use ABB Instrumentation?** | **Which ABB Product?**
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Flow/Kappa/Br | Optimized flow control of chemicals, additives and pulp minimizes variation in product brightness. Flow control of steam and gases. | Inherent noise-free signal ensures stable process control, thereby improving plant output and efficiency. Rugged design reduces maintenance and extends service life. | MAG SM Electromagnetic Flowmeter<br>TriMass Coriolis Mass Flowmeter<br>TrioWire<br>ACCU-BRITE sensors for brightness color and residuals<br>TBBXE5 pH/ORP sensor<br>TBBXP2pH/ORP Transmitter<br>ASK 800 Pressure transmitter<br>ASK 800 Flange-mounted level transmitter<br>ASD 800 Conductivity Sensor<br>ASK 800 Differential Pressure transmitter<br>SensyTemp WTR with head-mounted transmitter

pH/ORP | Optimum pH and ORP levels maintain chemical reactions and extractions constant, thereby improving product quality and reducing chemical costs. | Flat surface, solid-state sensors ensure maximum process uptime. Hot-Tap retractors provide flexible installation with minimum interruption. SMART-key instruments guide the user without the need for manuals. | TB551 pH/ORP sensor<br>TB557 Hot Tap pH/ORP sensor<br>TB82pH/ORP Transmitter |
ABB Instrumentation provides:

- Application Know-how
- Full-scope Supply
- Innovative Technology
- Rugged Devices
- Global Service Support

All photos courtesy of Kværner Pulping, Sweden