

Maximize Stock Production with Honeywell Smart Flush-Mount Transmitter



Problem: Pressure Measurement Around Pulp Screens, Cleaners & Refiners

The nature and consistency of pulp fiber as it makes its way through the processing units of a Pulp & Paper mill can make pressure measurement inherently problematic. Many standard instrument process connections require impulse lines or introduce cavities and recesses between the main process piping and the measurement sensor. These recesses can easily clog with fiber and render the measurement ineffective.

Although clogging can be a problem in many stock line applications, it is particularly noticeable where pressure measurements are being made to determine the status, and control the operation, of pulp processing equipment such as screens, cleaners and refiners. In these applications, pressures both upstream and downstream of the equipment play a major role in its efficiency and the ultimate production rate that can be supported.

Anti-clogging control systems monitor and adjust the pressure and flow differentials across the equipment to recover from clogging before the equipment “blinds over” due to full blockage. If the control system is unsuccessful, alarms are raised to allow manual operator intervention. Inaccurate or unreliable pressure measurements can prevent these control systems from functioning properly and may also hinder subsequent alarming action. Using overly conservative control of the “accepts” flow rate, to try to prevent clogging, can negatively impact production rate.

Although instruments with flush mounting remote seals are available, this technology is more costly, requires a more complex installation, and can be affected by ambient and process temperature changes.

To help avoid these problems, the industry standard 1" PMC™ flush mount fitting has gained wide acceptance for stock pressure measurement.



However, the pneumatic and electronic technologies on which these initial instruments were based lack the accuracy and stability of current smart transmitters.

Solution: ST 3000 Smart Technology with Flush Mount Connection

The Honeywell STG93P Smart Transmitter with flush mount process connection is designed specifically for these troublesome Pulp & Paper applications where clogging may be a problem. Its integrated, 1" flush mount meter body allows it to quickly and easily replace any transmitter using a PMC style process connection. For new installations, a simple 1" 316SS weld on mounting sleeve is available.

The STG93P offers full Honeywell Smartline™ functionality including diagnostics of the transmitter meter body, electronics and loop. It can measure pressures up to 100psig and features a 20:1 turndown ratio. Hastalloy C materials of construction are standard to withstand the demanding process environment of Pulp & Paper mills. The unit can be programmed via a local or remote interface and an integral LCD meter is available for displaying process variable information in user programmable engineering units.

Solution Benefits:

Installing the STG93P for your stock flow measurements provides:

- Better anti-clogging performance
 - **Avoids alarm trips** and production rate slow down
 - **Increases unit runtime**
- Reduced equipment blockage
 - **Avoids unit shut down and production rate impact**
- **Easy removal and insertion** for inspection and cleaning
- All the benefits of smart transmitter technology:
 - Improved measurement accuracy drives **optimum equipment performance**
 - Enhanced rangeability **reduces spares requirements**
 - Comprehensive diagnostics **lowers maintenance costs**
 - Improved reliability and stability **reduces number of calibrations**
- **Easy retrofits** using existing PMC style process connections
- An optional integral smart meter **eliminates additional filled gauges and indicators** plus their associated costs

Other Uses of the STG93P in Pulp & Paper Mills

The STG93P has been successfully applied in applications such as filters, starch cookers, vented stock tank levels and in many other mill locations where stock plugging is a problem.



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More Information

For more information on Smart Flush-Mount Transmitter, visit www.honeywellprocess.com, or contact your Honeywell account manager.

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