

Pharmaceuticals

Part Number: 05-02
550672 Revision B



THE APPLICATION PROBLEM

A large pharmaceutical company required a sanitary level measurement system for their blending tanks. The major requirements of this application were:

- Sanitary gauge
- Clean-In-Place (CIP) and Steam-In-Place (SIP) capability
- Ability to withstand harsh process conditions

The ultra-clean nature of this application required that all wetted surfaces, including instruments in contact with the process, are sanitary by design. The customer also needed a sensing technology that would maintain accuracy in harsh process conditions, such as varying temperatures and pressures, shifting dielectric constant, and shifting conductivity.

In addition, the areas inside and outside the tank are frequently cleaned with a low percentage caustic solution to maintain sanitary conditions. Both the sensor pipe and head electronics enclosure on the new measurement system would need to stand up to these clean-in-place and steam-in-place conditions.

THE LEVEL PLUS SOLUTION

After researching many types of level technologies, this customer chose the Level Plus M-Series gauge. The model that best suited their application was:

- Single-loop gauge with HART® communications
- 316L stainless steel NEMA 4X enclosure
- 48 in. electropolished 316L stainless steel sanitary gauge with a 3 inch TriClamp® process connection

The M-Series electropolished 316L stainless steel sanitary sensor pipe chosen for this application meets the 3A standard, a standard universally recognized by food and pharmaceutical companies.

The CIP and SIP requirements of this application preclude the use of untreated aluminum housings, thus the customer chose the 316L stainless steel NEMA 4X housing. The M-Series gauge is designed to tough NEMA 4X standards to withstand the high temperature, pressure, and caustic solutions used in the sanitation process. The customer doesn't have to remove the gauge from the vessel for cleaning.

The magnetostrictive technology of the M-Series gauge is unaffected by variable process temperatures, pressures, or media electrical properties that limit other level measurement technologies.

Reference:

Level Sensors Brochure: Part No. 550650.
M-Series Digital Specification Sheet: Part No 550784
M-Series Analog Specification Sheet: Part No 550677



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