

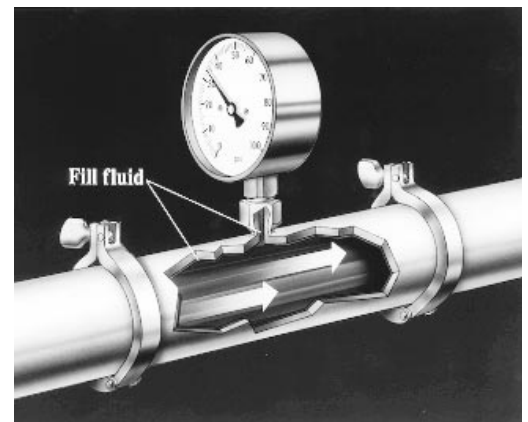
Non-intrusive Pressure Measurement - Biotechnology Industry

The biotechnology industry requires accurate measurement for process control while maintaining absolute cleanability and sterility. Processing biomaterials is usually done in small batches; therefore, pipe size can be very small, typically 1/2" or 3/4" in diameter. Until now, there has been no suitable method for cleanable pressure measurement in these small pipe diameters.

A protein manufacturer recently contacted Viatran with a request to measure output from a peristaltic pump. The pipe size was 3/4" and the pump's action caused extreme pressure pulsations of about 50 PSI at 1 – 10 Hertz, making a dial gage pointer unreadable.

Viatran solved the manufacturer's problem with the "25" Series Isolator, a tubular remote seal that allows for non-intrusive pressure measurement in pipes. As process fluid flows through the Isolator, pressure is exerted against the stainless steel lining of the pipe wall and displaces a fill fluid that drives a dial gage, pressure switch, or a pressure transmitter. There are no recesses or dead volumes involved in the measurement, eliminating potential problems with accumulation or contamination.

The customer's system consisted of a 3/4" pipe Isolator and a dial gage. Application engineers placed a hydraulic throttle screw between the gage and Isolator to dampen pressure pulsations. This solution is superior to oil filling the gage because it eliminates wear on the gage's moving parts. Without taps or recesses in the fluid path, the Isolator can be cleaned and sterilized in place (CIP and SIP). The Isolator also separates the pressure instrument from harsh cleaning solutions and extreme sterilization temperatures, allowing for longer instrument life.



Viatran's "25" Series Isolator offers a unique method of non-intrusive pressure measurement for pipes. Durable in various environments and available in pipe sizes from 1/2" to 4", the Isolator has flexibility that makes it ideal for the biotechnology industry. For more information about the "25" Series Isolator,

Call Viatran today.

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