INNOVATING NUCLEAR TECHNOLOGY
ANALYSIS AND MEASUREMENT SERVICES CORPORATION

EVALUATING PRESSURE TRANSMITTERS

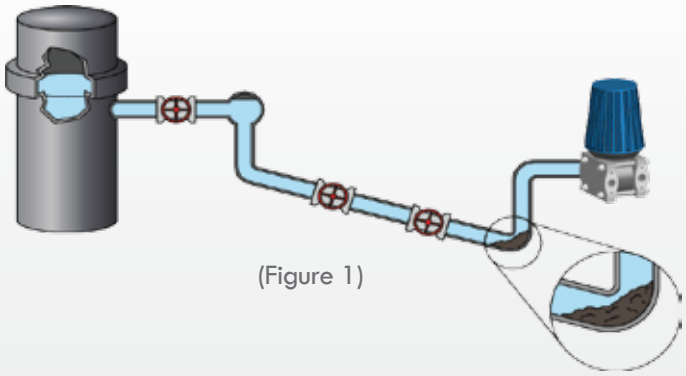
Sensing Line Problems

About

Foreign material can build up inside sensing lines and lead to sluggish or unpredictable pressure transmitter performance. Figure 1 illustrates the installation of a level transmitter at the end of a sensing line in a nuclear power plant. In this particular plant, online measurements are made once per fuel cycle to determine the transmitter's dynamic performance which can help identify blockages in the pressure sensing lines.

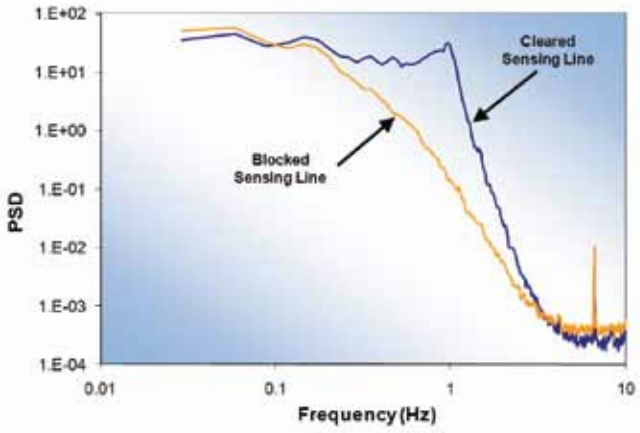
The analysis of these measurements involves a comparison of previous testing results, as seen in Figure 2. This transmitter showed signs of sensing line blockage based upon degraded dynamic performance. The plant determined that foreign material from the reactor coolant water had obstructed one of the sensing lines. The sensing line was purged and the dynamic tests were repeated to verify that the transmitter performance was restored.

AMS can evaluate the condition of transmitter sensing lines with no impact on plant operation. The test is performed remotely and while the plant is operating. This technique is much more efficient than the extensive maintenance required for periodic sensing line purging. Purging sensing lines is not only dangerous, but also involves significant manpower and can contribute to higher personnel radiation exposure. Call us for all the details on how AMS can evaluate the condition of your sensing lines.



(Figure 1)

In light of recent industry experience and concerns, AMS can evaluate the sensing lines of most pressure transmitters using noise analysis techniques that do not require the sensor to be removed from service.



(Figure 2)

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