

# APPLICATION NEWSLETTER

If dirt and liquid vapor exist in a process gas then chances are good that they will eventually find their way into the instrument piping and into the pressure port(s) of the pressure measurement instrumentation. If condensing vapor gets into a manometer, the condensate that forms will create a false head that affects the manometer reading. In pressure connecting lines, if a bead of condensate forms and bridges the cross sectional area of the tubing, capillary forces can hold the bead in place. Such a bead can dampen the pressure going to the readout device and mask the true pressure value. Dirt in a manometer indicating tube can inhibit the free movement of indicating fluid with changes in pressure. It can also contaminate the indicating fluid, changing its density and cause inaccuracies to creep in. Dirt can build up in a diaphragm or bellows DP Gauge and interfere with accurate measurement.

A simple solution to help monitor and control dirt and condensing vapor is to install a moisture and sediment trap in the piping between the instrument and the process connection. Meriam has several models to choose from such as the models 932S5/10-BG, 932R5/10-BG and 933A10. When properly installed these traps provide a settling volume in which contaminants and condensate drop out of the gas steam and fall to the bottom of the trap. The large viewing bowl or window makes the level of contaminants or liquid clearly visible. Traps are cleaned by removing the bowl or opening the drain valve. One thing to keep in mind when selecting a trap is to make sure that the safe working pressure is sufficient for your application.

The drawing below shows how the moisture trap would be typically installed.

