

liquids. As liquid viscosity increases, the slippage and hence the error is reduced. Measurement accuracies of 0.001 gallon per pulse are available.

PD meters are widely used for flow measurement of fuel oils and other chemicals and hydrocarbon products in small pipe sizes. The basic limitation of a PD meter is that it has moving parts with close tolerances and clearances. This limits its use to clean liquids and necessitates regular maintenance. High temperatures and pressures also can distort the output signal.

For large size PD meters, physical size and weight will require special mounting pads. Also a device to eliminate air and vapor from the liquid is required, since the meter will measure air along with the liquid. PD meters must not be left dry kept flooded at all times. If PD meters are left dry, the meter will be "hammered" every time the pump is turned on.

1.0 MEASUREMENT ACCURACY

The level of accuracy of a flow measurement system is greatly influenced by the piping and component installations. For custody transfer, revenue metering or chemical reactions accuracy of better than 0.25% is often required. For control purposes, 1.0- 3.0% accuracy and better than 1.0% repeatability is usually sufficient. Upstream and downstream pipe diameters can be reduced for installations that are only designed for control measurements.