

Viscometer using a piezoresistive rod

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Measuring the viscosity of liquids is important in many industrial fields. The process of measuring the viscosity is difficult and complex requiring considerable time. We present a simple and fast method for measuring the viscosity of fluids using a piezoresistive sensor. Fluids passing the submerged disks connected to the cylindrical rod bend the rod with a piezoresistive sensor causing a change in resistance of the sensor. By examining its change in resistance, we could measure the viscosity of fluids. We expect this viscometry will be used in many industrial fields of rheology since it can be used on-line in the field without complex process.