Product Information

VISCOMETER FANN MODEL 35

The test fluid is contained in the annular space or shear gap between the cylinders. Rotation of the outer cylinder at known velocities is accomplished through precision gearing. The viscous drag exerted by the fluid creates a torque on the inner cylinder or bob. This torque is transmitted to a precision spring where its deflection is measured and then related to the test conditions and instrument constants. This system permits the true simulation of most significant flow process conditions encountered in industrial processing.

FANN Direct Indicating Viscometers combine accuracy with simplicity of design, and are recommended for evaluating materials that are Bingham plastics. These instruments are equipped with factory installed R1 Rotor Sleeve, B1 Bob, F1 Torsion Spring, and a stainless steel sample cup for testing according to ***American Petroleum Institute*** Specification RP 13B. Other rotor-bob combinations and/or torsion springs can be substituted to extend the torque measuring range or to increase the sensitivity of the torque measurement. Shear stress is read directly from a calibrated scale. Plastic viscosity and yield point of a fluid can be determined easily by making two simple subtractions from the observed data when the instrument is used with the R1-B1 combination and the standard F1 torsion spring.

Direct Reading Viscometers

These viscometers have been designed so viscosity in centipoise or millipascal seconds is indicated on the scale when the standard rotor, bob and torsion spring are used at a test speed of 300 rpm. Viscosities at other test speeds are simple multipliers of the scale reading.

The torque scale has a range to 300 degrees deflection with a resolution of about 0.5 degrees. It is also possible to compute a shear stress from the dial reading with appropriate instrument constants. Likewise, a shear rate factor can be computed for a given rotor-bob combination (shear gap) to give a defined shear rate in sec^{-1}.

A wide range of shear rates is made possible through selective gearing and by interchangeable rotors and bobs of various diameters. The instrument may be operated with open end rotor sleeves, which permit a gentle recirculation of material through the annulus, thereby minimizing settling of heavy particles. Optional closed end rotor cups are available for testing of smaller sample volumes.

The torsion springs are designed for ease of interchangeability, which permits the shear stress range of the instrument and, hence, the viscosity measuring range to be optimized for a given testing problem.

Fann Model 35 Viscometers are versatile instruments for research or production use. They can be used wherever a regulated-frequency power source is available. The ***Model 35*** Viscometer is widely known as the ***"Standard of the Industry"*** for drilling fluid viscosity measurements.