MOST

Matériels et Outils
pour le Sans Tranchée

Dependable Products From People You Trust®

Marsh Funnel Viscometer

No. 110-10

Instruction Manual

Updated 5/27/2009
Ver. 1.2

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Introduction:

The Marsh Funnel Viscometer is a simple device used for routine quick measurements of fluid viscosity. It is an excellent indicator of changes in drilling fluid properties. The Marsh Funnel Viscometer is conical in shape - 6" (152 mm) in diameter at the top and 12" (305 mm) long with a capacity of 1,500 cm^3. A 12-mesh screen covers half of the top and is designed to remove any foreign matter and drilled cuttings from the fluid. The fluid runs through a fixed orifice at the end of the funnel, which is 2" (50.8 mm) by 3/16" (4.7 mm) in size.

Component:

#110-15 12-Mesh Half Circle Screen

Recommended Accessories:

#110-20 Plastic Measuring Cup, 1000 mL
#110-40 Stainless Steel Measuring Cup, 1000 mL
#154-00 Thermometer w/Metal Dial, 5" Stem, 0-220°F
#154-10 Thermometer w/Metal Dial, 5" Stem, Dual Scale, 50/500°F, 0/250°C
#154-74 T-Handle Reamer, 3/16"
#155-25 Digital Stopwatch

Procedure:

1. Hold the clean, dry funnel in an upright position with the index finger over the outlet.
2. Pour a freshly obtained sample of the fluid to be tested through the screen until the fluid level reaches the bottom of the screen.
3. Remove the finger from the outlet and start the stopwatch. Using the measuring cup, measure the time it takes the fluid to fill to the one-quart (946 mL) mark of the cup.
4. Measure the temperature of the fluid in °F or °C.
5. Report the time to the nearest second as Marsh Funnel viscosity and record the temperature of the fluid.

Calibration Check:

Periodically check the calibration of the Marsh Funnel by measuring the viscosity of fresh water. Using the procedure described above, one quart (946 mL) of fresh water at a temperature of 70° ± 5°F (21° ± 3°C) should outflow from the orifice in 26 ± 0.5 seconds. If the Marsh Funnel checks out of calibration, it should be cleaned again, making sure that nothing is obstructing the outlet. A T-Handle Reamer (#154-74) is available for removing obstructions from the outlet. If the Marsh Funnel continues to check out of calibration, the outlet tube has probably been bent out of shape and the funnel should be replaced.

Maintenance:

1. Clean and dry the funnel and any other accessories thoroughly after each use.
2. Do not bend or flatten the brass orifice in the bottom of the funnel, as it can make readings inaccurate.

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