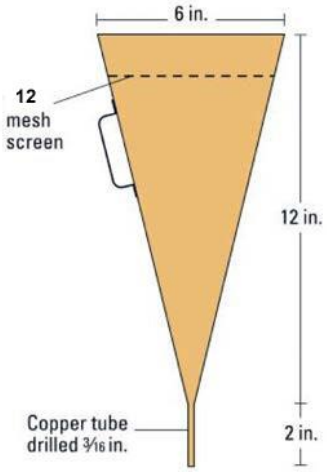
Marsh Funnel Viscometer Instructions

Description

Fann No. 201 Marsh Funnel is a rugged, easy to operate instrument for rapid, on the spot measurements of drilling mud viscosity. The rate of gelation and the density of the slurry considerably influence the viscosity measurement. Frequent reporting of the funnel viscosity makes it possible for mud engineers to observe sudden changes in the slurry viscosity and to take corrective action when necessary.

Funnel viscosity is the ratio of the speed of the slurry as it passes through the outlet tube (shear rate) to the force (weight of the slurry) causing the slurry to flow (shear stress). Funnel viscosity is reported as the seconds required for one quart of slurry to flow out a full funnel.



The Marsh Funnel is precision-made to outflow one quart of water at 70 ± 5°F in 26 ± 0.5 seconds.

Equipment

- Marsh Funnel
- Measuring Cup (graduated)
- Stopwatch
- Thermometer

The Marsh funnel should be clean and dry before performing this procedure.

Procedure

1. Collect a fresh slurry sample.
2. Hold the funnel erect with a finger over the outlet tube, and pour the slurry into the funnel through the screen until the slurry level reaches the bottom of the screen. (The screen will filter out the larger particles that could clog the outlet tube.)

When the funnel is filled to the proper level, it holds more than one quart of slurry.

3. Quickly remove your finger from the outlet tube, and at the same time, begin timing the slurry outflow.
4. Allow one quart (946 ml) of slurry to flow from the Marsh funnel into a measuring container.
5. Record the seconds it takes for the quart of slurry to flow from the funnel. Report this value as the Marsh funnel viscosity. Also record the temperature of the slurry sample.

Calibration Check

Periodically check the calibration of the Marsh funnel by measuring the viscosity of fresh water. The Marsh funnel viscosity of one quart of fresh water at 70 ± 5°F (21 ± 3°C) is 26 ± 0.5 seconds.

If the funnel is out of calibration, clean it using a pipe cleaner to make sure that nothing is obstructing the outlet. If the funnel continues to give an incorrect reading for fresh water after cleaning, then the outlet tube has probably been damaged and the funnel should be replaced.

Instrument Care

Follow these suggestions to care for the Marsh Funnel:

- Clean and dry the funnel thoroughly after each use.
- Take special care not to bend or flatten the brass outlet tube at the bottom of the funnel. The Marsh Funnel Viscosity readings are computed using the exact diameter of this outlet and if the outlet is distorted the readings will be inaccurate.

Parts List

The Marsh Funnel viscometer is shipped with no accessories, but some of the additional equipment necessary for the measurement procedure can be obtained from Fann Instrument Company.

PART NO.	DESCRIPTION
206884	Marsh Funnel Viscometer, No. 201
206889	Measuring Cup, Plastic, No. 202
206893	Measuring Cup,1000 ml, Stainless Steel
206898	Digital Stopwatch
206037	Metal Dial Thermometer (Fahrenheit)
206044	Digital Thermometer (Fahrenheit and Centigrade)

Warranty

Fann Instrument Company warrants its products to be free from defects in material and workmanship for a period of 12 months from the time of shipment. If repair or adjustment is necessary, and has not been the result of abuse or misuse within the twelve-month period, please return, freight prepaid, and correction of the defect will be made without charge.

Out of warranty products will be repaired for a nominal charge.

Please refer to the accompanying warranty statement enclosed with the product.

Returns

For your protection, items being returned must be carefully packed to prevent damage in shipment and insured against possible damage or loss. Fann will not be responsible for damage resulting from careless or insufficient packing.

Before returning items for any reason, authorization must be obtained from Fann Instrument Company. When applying for authorization, please include information regarding the reason the items are to be returned.

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