

Marsh Funnel

Instruction Manual



Viscosity

The Marsh funnel is a simple device for indicating viscosity on a routine basis.

Declaration of Conformity

The manufacturer

MUDTEST Sp. z o.o.
Chętnońskiego 77, 32-500 Chrzanów, Poland

hereby declares that the following product:

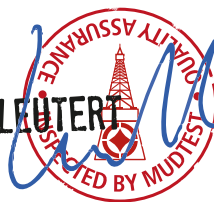
Name of product	Marsh Funnel
Drawing number	8020.00.20000

conforms to the provisions of the policies identified below, including any amendments thereto in effect at the time of the declaration:

- API RP 13B-1 Field Testing: Water-based Drilling Fluids**
and identical
ISO 10414-1 Petroleum and natural gas industries – Field testing of drilling fluids – Part 1: Water-based fluids

- API RP 13B-2 Field Testing: Oil-based Drilling Fluids**
and identical
ISO 10414-2 Petroleum and natural gas industries – Field testing of drilling fluids – Part 2: Oil-based fluids

SEBASTIAN LEUTERT



Adendorf, 28.11.2022

Place and date

Management representative for declarations of conformity

Description

The viscosity of drilling fluid is determined using the Marsh funnel. The Marsh funnel is made of impact-resistant plastic and has an orifice with a length of 50.8 mm (2.0 in) and an inside diameter of 4.7 mm (3/16 in). A screen attached to the Marsh funnel prevents the orifice from becoming clogged with larger particles.

A graduated cup with a capacity of over 946 ml (1 quart) was specially designed to match the Marsh funnel viscometer. The Marsh funnel cup has a double spout for ease of use. The scale in milliliters is firmly cast into the cup. There is also a scale in ounces based on the US system of measurement.

During operation the funnel orifice is covered with a finger and freshly sampled drilling fluid is poured through the screen into the upright funnel. The finger is removed and the stopwatch started. The time for the drilling fluid to fill to 946 ml (1 quart) mark of the cup is measured.

To perform the Marsh funnel test, the Marsh funnel, a support, the Marsh funnel cup, a stopwatch and a thermometer are required.

The Mudtest Marsh funnel is conform to API 13B-1 and API 13B-2, the corresponding ISO 10414-1 and ISO 10414-2: Oil and gas industry - Field testing of drilling fluids” as well as EN 14117: Products and systems for the protection and repair of concrete structures. A link to these standards can be found at Download area. While the API standard describes test methods for drilling fluids, EN 14117 only contains a dimensional sketch of the funnel described here.

Technical Specifications

Marsh Funnel

Material	:	Impact-resistant plastic
Length	:	305 mm (12.0 in)
Diameter	:	152 mm (6.0 in)
Capacity	:	1500 ml (1,6 quarts)
Orifice length	:	50,8 mm (2.0 in)
Orifice inside diameter	:	4,7 mm (0,188 in = 3/16 in)
Metal screen openings	:	1,6 mm (0.063 in = 1/16 in) / 12 mesh

Graduated Cup

Material	:	Impact-resistant plastic
Capacity	:	946 ml (1 quart)

Procedure

1. Cover the Marsh funnel orifice with a finger.
2. Pour freshly sampled drilling fluid through the screen into the clean, upright funnel. Fill until fluid reaches the bottom of the screen.
3. Remove the finger and start the stopwatch. Measure the time for drilling fluid to fill to 946 ml (1 quart) mark of the cup.
4. Measure the temperature of the drilling fluid.
5. Report the time to the nearest second, as Marsh funnel viscosity. Report the temperature of fluid to the nearest degree Celsius (degree Fahrenheit)
6. Thoroughly clean all components as residue from hardened drilling fluid inside the funnel will affect the accuracy of future tests.

Maintenance and Calibration

Apart from cleaning, the Marsh Funnel requires no maintenance.

To check the calibration of the Marsh funnel, fill it with fresh water at a temperature of 21 +/- 3 °C (70 +/- 5° F). The out-flow time of 946 ml (1 quart) shall be 26 +/- 0,5 s.

Order Information

Marsh funnel (4,76 mm)	8020.00.20000
Graduated cup with double spout	8020.00.50000
Support for Marsh funnel	8020.00.70000
Stopwatch	3600.00.00000
Thermometer	3700.10.00000