

Electrical Stability Tester (EST)

Description

The Fann Electrical Stability Tester, Model 23E is a portable instrument that measures the electrical stability (ES) of an oil-based drilling fluid. The EST conforms to the electrical stability test procedure that is described in API Recommended Practice for Field Testing Oil-based Drilling Fluids, API RP 13B-2.

The EST includes the meter, electrode probe, 2 batteries, a power cord, 2 calibration standards, and a plastic carrying case.



Application

The drilling fluid's electrical stability is measured by applying a steadily increasing sinusoidal alternating voltage across a pair of parallel plate electrodes (probe). This probe is submerged in the oil-based drilling fluid.

It is recommended that you record several measurements to establish a trend. These measurements will reflect an accurate condition of the drilling fluid and provide a basis for drilling fluid treatments.

Features and Benefits

- Portable, easy to use in the field
- Powered by AC or batteries
- Self-calibration feature for regularly checking instrument's internal calibration
- Status messages on backlit digital LCD to guide and simplify operations
- Low battery warning message (battery life of approximately 250 tests)
- Automatic shut off after 3 minutes idle time



Specifications	
Operating Temperature Range	32°F to 122°F (0°C to 50°C)
Accuracy	± 2% of Expected Reading
Output Frequency	340 ± 2 Hz
Output Wave Form	Sinusoidal, <1% total harmonic distortion
Output Voltage Range	0 V to 2025 V ± 25 V peak to ground (1432 RMS)
Breakdown Peak Output Current	61 µA
Peak Volts Readout	Backlit Digital LCD
Voltage Ramp Rate	150 ± 10 V/sec
Power Supply	Two, 9 V alkaline batteries 100 to 240 VAC, 50/60 Hz, 10 watts
Battery Life	Approximately 250 tests
Dimensions (W x D X H)	8.3 x 5.1 x 2.8 in. 21 x 13 x 7.1 cm
Weight	4 lb (1.8 kg)

Ordering Information

Part No. 102130986 — Electrical Stability Tester

EST includes

- 205643 — 9 Volt Battery
- 208452 — Power Cord
- 208557 — EST Probe with Cable
- 209067 — Calibration Standard, High Range
- 209068 — Calibration Standard, Low Range

Optional

- 209066 — Calibration Standard Set

Fann Instrument Company offers a complete line of instruments for testing drilling fluids in accordance with API Recommended Practice 13B-1, ANSI/API 13-B-1/ISO 10414-1; API Recommended Practice 13B-2; and API Specification 13A.