The Static Gel Strength Measurement (SGSM) device uses a vaned bob to condition a cement slurry inside a pressurized test cell and intermittently measure static gel strength at down-hole conditions. By directly measuring the forces required to initiate movement in the sample, the SGSM provides an accurate way of determining the static gel strength.

- Automatically conditions the slurry in-place (1 - 150 RPM)
- Provides a direct mechanical measurement of static gel strength
- Simultaneously measures static gel strength and compressive strength (dual-cell units only)
- Intermittent or continuous measurement under high-temperature, high-pressure conditions
- Data acquisition system with automatic temperature control included
- Simple calibration and system check
- Quick clean up and turn around

Two SGSM Units on a 20,000 PSI Dual Cell UCA

Features

A Single SGSM Unit on a 5,000 PSI Twin Cell UCA

Patent No. 9,612,232
Static Gel Strength Measurement Device

Technical Specifications and Requirements

The High Pressure SGSM (#120-58) fits in a high-pressure UCA test cell. This configuration is compatible with both the Single Cell UCA (#120-50) and the Dual Cell UCA (#120-52).

- Maximum Temperature: 400°F (204°C)
- Maximum Pressure: 20,000 PSI (138 MPa)
- Size (Including Cell): 20” Tall × 6” Diameter (51 × 15 cm)
- Weight: 50.6 lb (23 kg)

The Low Pressure SGSM (#120-53) fits in a low-pressure UCA test cell. This configuration is compatible with the Twin Cell UCA (#120-51).

- Maximum Temperature: 400°F (204°C)
- Max Operating Pressure: 5,000 PSI (138 MPa)
- Size (Including Cell): 18.25” Tall × 6” Diameter (46 × 15 cm)
- Weight: 47.2 lb (21.4 kg)

Requirements

- Power: 100 - 240 Volt, 50 - 60 Hz, 2 Amp
- Computer
  - Windows XP or higher
  - RS-232 Serial Port (or Serial to USB Adapter)
  - Minimum Screen Resolution: 1280 × 680

OFITE Data Acquisition Features

- Data is available in real time on-screen and is also stored in an Excel® spreadsheet for easy graphical viewing and printing
- A computer running OFITE software graphs the data from both cells
- Windows®-based software

UCA/SGSM Software

Patent No. 9,612,232

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