HT Ultrasonic Cement Analyzer
Model 520

Description

Fann HT UCA (High-Temperature Ultrasonic Cement Analyzer) Model 520 is used to provide an indication of the relative strength development of a slurry sample while being cured under downhole temperature and pressure conditions. Relative strength is determined by measuring the change in velocity of an ultrasonic signal transmitted through the cement slurry specimen as it cures. As the strength of the cement specimen increases, the transit time of the ultrasonic signal through the specimen decreases, allowing the relative strength to be calculated.

The Model 520 is able to test cement slurries at temperatures up to 500°F and pressures as high as 20,000 psi. The slurry sample to be tested is prepared in accordance with API recommended practices and then placed in a temperature and pressure-controlled autoclave unit (cell). Pressure control is achieved manually using the air and pressure regulators. The user is instructed step by step where to input programming values. A preview of the ramp profiles are displayed graphically for verification. The desired and actual data are displayed along with numerous other data during the test, giving the user a considerable amount of usable information.

Advantages

- Digital, realtime display of current strength, transit time, pressure and temperature measurements
- USB flash drive for data export
- Microsoft® Windows® 7* OS
- Non-destructive method determining relative compressive strength and WOC time
- Compact benchtop design
- Integrated cooling to cool the pressure vessel quickly (Optional chiller available)
- Transit time calibration is carried out by water test fluid
- No other computer needed
- 12in color touchscreen display
- Realtime networked data acquisition
- Rugged and compact electronics withstand lab environment
- Automatic shutdown based on compressive strength or test time
- Higher temperature rated, ultrasonic transducers
- Fann software capable of integrating competitor data acquisition systems and running multiple machines
- Step by step instructions for programming options onscreen

- *Microsoft and Windows are registered trademarks of Microsoft Corp.*

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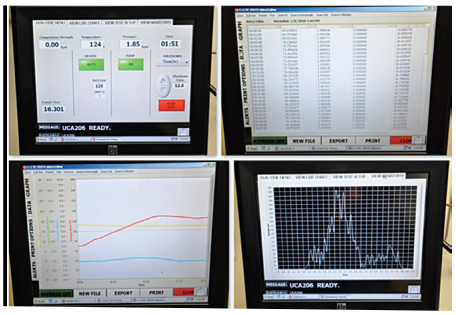
Data Control

The Model 520 is equipped with Fann's state-of-the-art temperature control and data acquisition software that provides unparalleled ease of use. Calibration and diagnostic capability are easily accessed using the touch screen features of the monitor. A color graph showing compressive strength, temperature, pressure and transit time may be plotted on any printer, downloaded to a USB flash drive or exported as a .pdf file. Numerical test data can be exported as a .txt file.



Specifications

Electrical	
Input Voltage	230 VAC (±10%)
Current	20 Amps
Input Frequency	50-60 Hz

Environmental	
Operating Temperature	32 -105 °F (0 - 40 °C)
Operating Humidity	0 - 95% non-condensing

Mechanical	
Height	15 in. (38 cm)
Width	26 in. (67 cm)
Depth	15 in. (38 cm)
Weight	150 lbs. (68 kg)

Heater	
Heater Power	1500 W Insulated Integrally Cooled PID Controlled

Service Connections	
Compressed Air	100psi min Water separated Filtered
Cooling Water	5-80 psi (600kPa)
Nominal Flow	2L/min Filtered

Ordering Information

Part No. 102546636 - Ultrasonic Cement Analyzer System, 20,000 psi, 500° F Model 520

Fann Instrument Company offers a complete line of equipment, materials, and supplies for analyzing various drilling fluids and oil well cements in accordance with API Specifications and API Recommended Practices.

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