



**CHANDLER**  
ENGINEERING

## Model 4265-HT

### *HIGH TEMPERATURE UCA*

#### A Critical Tool for Oil Well Cement Testing

Testing the strength of standard cement cubes only provides information about cured strength. To accurately and effectively schedule a cementing job with a minimum WOC time, you need to determine how a slurry develops strength over time during curing. The Model 4265-HT Ultrasonic Cement Analyzer (UCA) provides a determination of the strength development of a cement sample while it is being cured under very high downhole temperature and pressure conditions.



#### A Proven, Reliable Technique

Cement strength is determined by measuring the change in velocity of an ultrasonic signal transmitted through the cement specimen as it hardens. As the strength of the cement specimen increases, the ultrasonic signal's transit time through the sample decreases. Using proprietary empirical algorithms that have been proven throughout the Oil and Gas Industry, the relative strength is calculated.

#### Operational Simplicity

The cement slurry to be tested is prepared in accordance with API recommendations, then placed in the unit's temperature and pressure-controlled cell which simulates the curing conditions that are expected downhole. During testing, temperature is automatically controlled while pressure is manually set. For dynamic, precise pressure control, an automatic pressure system is available.

All test data including the compressive strength results are then transferred to a computer, running Chandler Engineering Model 5270 Data Acquisition software.

#### **FEATURES**

- ✓ Real-Time Observation of Strength Development
- ✓ Used to predict WOC time
- ✓ Non-Destructive Method
- ✓ Uses Proven Industry-Standard Algorithms
- ✓ Chiller option for simulating low temperature cementing
- ✓ Chandler 5720 Data Acquisition Software
- ✓ Optional Automatic Pressure Controller
- ✓ Optional Model 4268ES Cement Expansion / Shrinkage cell



The software produces real-time graphs of the calculated strength, measured temperature and transit time. These graphs can be printed at any point during testing. All test data is recorded on the computer as the test progresses so that data is not lost in the event of a power failure. The Model 5270 software is capable of monitoring multiple instruments so only one computer is needed in the lab thereby saving valuable space.

## Specifications

Maximum Temperature      600°F / 316°C  
Maximum Pressure          20,000 psi / 138 MPa

### Utilities

Power                            220 VAC, ±15%, 50/60 Hz, 15A – heater & solenoid valves  
   90 - 240 VAC, 50/60 Hz, 1A - Instrumentation power  
Compressed air                75-125 psi / 520—860 kPa  
Water                            20-80 psi / 140-550 kPa nominal flow, 2 liters/min  
Coolant                         Water or Ethylene glycol solution  
Drain                             Suitable for hot water temperatures that may exceed 200°F / 93°C

*Manufacturer's specifications subject to change without notice*



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