OIL WELL CEMENTING INSTRUMENTS

A complete portfolio of API and ISO specified instruments for testing key performance properties of oil well cements. Many instruments also carry the CE mark. Refer to individual data sheets for complete details.

DATA ACQUISITION AND CONTROL SYSTEM

The MODEL 5270 DATA ACQUISITION AND CONTROL **SYSTEM** provides complete control over the temperature and pressure schedules of oilfield laboratory instruments from a personal computer. The software simplifies the sharing of test information, reports and graphs between laboratories around the world. The Model 5270 is designed to work seamlessly with CHANDLER ENGINEERING instruments and is versatile so that it can be configured with other instruments.



Standalone or networked PC with Model 5270 Data Acquisition System

For over 70 years, Chandler Engineering has produced the highest quality measurement instruments for the Oil & Gas Industry. Today, Chandler Engineering, the Industry's largest instrument supplier, continues its efforts to help their customers improve the efficiency and productivity of their drilling and production operations.

The Oil & Gas Industry is truly a global endeavor with operations on every populated continent. As a global industry needs global support, AMETEK strives to continuously grow and develop its sales and support network. In addition to a global network of factory trained personnel, AMETEK maintains factory-direct customer support capabilities at its manufacturing sites and a growing number of regional offices.

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OIL WEL CEMENTIN





CONSISTOMETERS

HIGH PRESSURE. HIGH TEMPERATURE (HPHT) CONSISTOMETERS are designed to test a cement's thickening time under a variety of downhole conditions in compliance with API standards. Single and dual-cell models are available.

Model 7322 (400°F/204°C; 22,000 psi/150 MPa)

Model 8340 (600°F/315°C; 40,000 psi/275 MPa)

Model 7025C10 Dual Cell (400°F/204°C; 25,000 psi/172 MPa)

Model 8040D10 Dual Cell (600°F/315°C: 40.000 psi/275 MPa)

BENCH-TOP CONSISTOMETERS enable space-limited mobile and remote cement testing laboratories to perform the fundamentally necessary testing of cement thickening time.

Model 7716 (350°F/177°C; 16,000 psi/110 MPa)

Model 7720 (400°F/204°C; 20,000 psi/138 MPa)

ATMOSPHERIC CONSISTOMETERS are used to perform basic atmospheric pressure thickening time tests.

Model 1200 Indicating (200°F/93°C; atmospheric pressure)

Model 1250 Recording (200°F/93°C; atmospheric pressure)

COMPRESSIVE STRENGTH

ULTRASONIC CEMENT ANALYZERS (UCA) provide a determination of a cement sample's compressive strength development over time while it is being cured under downhole temperature and pressure conditions.

Model 4265HT (600°F/315°C; 20,000 psi/137 MPa)

Model 4265 (400°F/204°C; 20,000 psi/137 MPa)

Model 4262 Twin Cell UCA (400°F/204°C; 5,000 psi/34 MPa)

CEMENT EXPANSION/SHRINKAGE CELLS continuously measure the expansion or shrinkage of a cement sample under high-temperature and high-pressure conditions. This is an option available for use with Models 4265, 4265-HT and the 5265 SGSA. A Quizix pulse free precision pump is also required.

Model 4268 ES (400°F/204°C; 10,000 psi/68 MPa)

CEMENT CUBE TESTING equipment includes pressurized curing chambers and an automatic, digitally-controlled, hydraulic press for destructively determining the compressive strength of cured, standard two-inch cement cubes in compliance with API standards.

PRESSURIZED CURING CHAMBERS Model 1910 (16 cubes; 700°F/370°C; 25,000 psi/172 mPa) Model 7355 (16 cubes; 700°F/370°C; 5,000 psi/34 MPa) Model 7360V (4 cubes or BP settling tube test; 600°F/315°C; 6,000 psi/41 MPa) Model 7370 (8 cubes; 700°F/370°C; 3,000 psi/20 MPa) Model 7375 Dual Cell (8 cubes/cyl.; 700°F/370°C; 3,000 psi/20 MPa)

COMPRESSIVE STRENGTH TESTERS Model 4207D (Max. load: 50,000 lbf/222 kN)



MODEL 7322

MODEL 4265HT



MODEL 7370

GEL STRENGTH AND GAS MIGRATION

STATIC GEL STRENGTH ANALYZERS (SGSA) offer simultaneous measurement of a cement slurry's static gel strength development and its compressive strength development while it is curing under downhole temperature and pressure conditions.

Model 5265 SGSA

MECHANICAL GEL STRENGTH ANALYZERS allow operators to study the development and resulting gel strength throughout the gel phase of cement slurries. This tool equips the operator with the knowledge required to improve slurry designs to meet the critical requirements of well placement. Available as an upgrade to your existing single cell UCA, as Model 5265MG, or a standalone instrument with Quizix Precision Pump as Model 5265 MGSA.

Model 5265 MGSA

Model 5265MG

CEMENT HYDRATION ANALYZERS are precision instruments that measure three key aspects of oil-well cement: its susceptibility to gas migration, its degree of hydration, and its gas permeability.

Model 7200

MECHANICAL PROPERTIES

MECHANICAL PROPERTIES ANALYZERS (MPRO) continually measure the elastic mechanical properties (Poisson's ratio, Young's modulus, bulk modulus) and the compressive strength of API cement as it cures under high-temperature and high-pressure conditions.

Model 6265 MPRO

FLUID LOSS

FLUID LOSS CELLS to measure the fluid loss properties of cement slurries or drilling fluids in accordance with API standards

Model 4300 Model 7120



MODEL 5265MG

MODEL 7200

MODEL 7120

MODEL 4300

VISCOMETERS

The Model 3530 is a fully automated concentric cylinder viscometer designed to meet API and ISO requirements for viscosity measurements of fluids used in well servicing. This viscometer is fully operational in manual mode without the use of a computer or as a computer-controlled viscometer with pre-configured periodic shear rates. The Rheo 3000 Data Acquisition Software is provided with the instrument. It is a powerful tool that ensures consistent testing parameters and results. A thermal cup for testing at elevated temperatures is available.

Model 3530

SLURRY PREPARATION

CONSTANT SPEED MIXERS blend cement slurry at an automatically maintained, constant shear rate in accordance with API standards. 1 gt/1 liter or 4qt/4 liter volume; delivered preset to run the API Spec10A and RP10B2 mixing speeds of 4,000 and 12,000 rpm or fully variable speed selection from 1,000 to 18,000 rpm.

Model 3260 (1 gt/1 liter)

Model 3270 (4 gt/4 liter)

ATMOSPHERIC CONSISTOMETERS prepare cement slurries for the testing of rheological properties, fluid loss and various other properties in strict compliance with API standards.

Model 1200

Model 1250 includes Chart Recorder

WETTABILITY TESTERS are two instruments in one: a constant speed mixer and an instrument for the evaluation of the oil/water phase transition of oil-based drilling fluids as they interact with spacer and/or pre-flush systems. This is essential for evaluating the wettability of spacers and pre-flushes that are intended to water wet the surfaces to which cement is expected to bond.

Model 3065 (1 gt/1 liter volume; 18,000 max. rpm)

