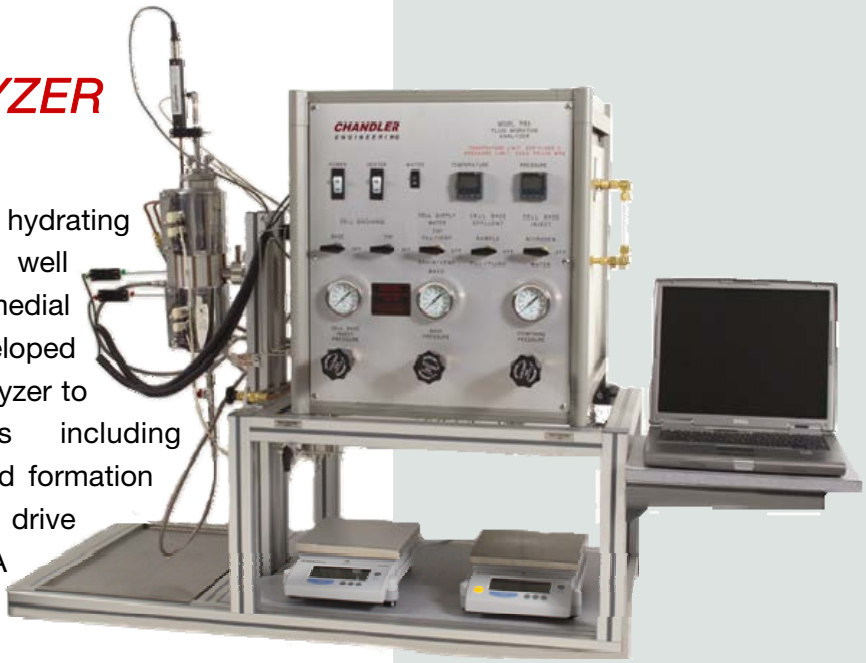
Model 7150

FLUID MIGRATION ANALYZER



A Critical Tool for Oil Well Cementing

Fluid Migration (gas or liquid) through hydrating cement slurry is a major reason for well completion failures which require costly remedial well treatments. Chandler Engineering developed the Model 7150 Cement Fluid Migration Analyzer to realistically simulate well parameters including temperature, hydrostatic head pressure, fluid formation pressure and the pressure gradients which drive invasive fluid flows. The Model 7150 FMA provides a redefinition of the gas migration device presented in SPE 11207.

The FMA test cell itself is similar to an API HTHP fluid loss cell. A hollow hydraulic piston at the top of the cell is pressurized to simulate the effect of the hydrostatic pressure on the cement. Filtrate from the cement slurry can be collected from the bottom and the top of the cell through screens or rock core. The test cell can be rotated to simulate actual wellbore angles.

Operational Simplicity

The Model 7150 is designed to be as easy to use as possible, with an intuitively designed operation panel and many innovative features to enhance system ergonomics. The instrument uses our well-regarded Model 5720 Data Acquisition and Control System to record and display all temperature, pressure and flow measurements in real time. Test conditions, including the static gel strength profile of the cement, are easily programmed and controlled through this system. The Chandler Engineering Model 5265 Static Gel Strength Analyzer, available separately, is commonly used to measure the gel strength versus time profile of a cement formulation.

FEATURES

- ✓ Ability to Simulate gas and Liquid Migration Conditions
- ✓ Fluid Loss Measurement Through Standard Screens or Core Samples
- ✓ Multi-Channel, Real-Time Data Acquisition Via the Model 5270 Data Acquisition & Control System
- ✓ Easy to clean test cell

AMETEK® OIL & GAS

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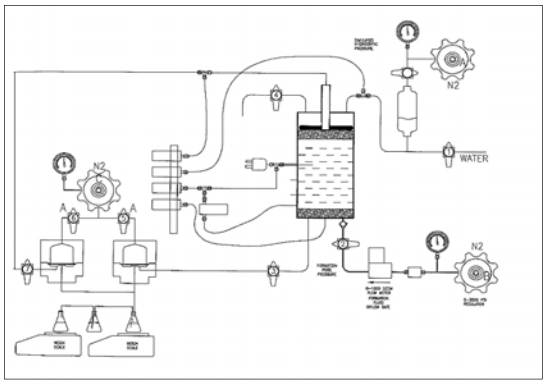
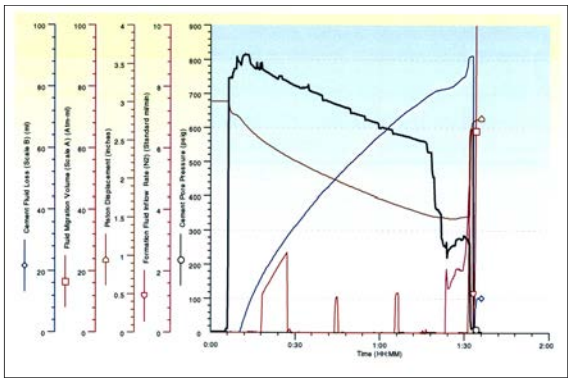
Among the innovations of the Model 7150 is the ability to run the test cell with standard fluid loss screens or rock core samples. Simulation of deep water conditions is possible by supplying chilled water to chill the test cell. Clean-up after testing is quick and easy as the test cell opens on both ends.



7150 Valve Schematic



Sample Screen Showing Vol. & Flow Data

Specifications

Temperature Range	75 ºF to 400ºF / 24ºC to 204ºC
Maximum Pressure	2,000 psi / 14 MPa
Data Acquisition	Chandler Engineering Model 5270 Data Acquisition and Control Software with a stand-alone computer

Utilities

Water	20-80 psi / 140 – 550 kPa
Nitrogen	2000 psi / 14 MPa
Power Supply	220 VAC +/- 15% 50/60 Hz 1 kVA

Physical Dimensions

Dimensions (w x d x h)	63 in. x 24 in. x 45 in. / 160 x 61 x 114 cm
Weight:	205 lb / 93 kg

Shipping Information

Dimensions (w x d x h)	57 in. x 48 in. x 47 in. / 145 x 122 x 119 cm
Weight	455 lb / 206 kg

Manufacturer's specifications subject to change without notice

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