

Instruments for Physical Testing of Coal

Dilatometer – DL 4000



The DL 4000 Dilatometer is an automated instrument for determining the swelling properties of hard coal when heated under standard conditions: dilatation and contraction are obtained by inserting a pencil of powdered coal, formed under pressure, in a narrow tube topped by a piston and reading the displacement of the piston as a function of the temperature.

ISO Standard 349 "Hard coal Audibert-Arnu dilatometer test", DIN 51 739 "Ruhr Dilatometer and ISO 8264 "Hard coal - Determination of the swelling properties using a dilatometer" and ASTM D 5155 "Standard Test Method for Determination of the Swelling Properties of Bituminous Coal Using a Dilatometer" specify slightly different methods for such determination.

The DL 4000 performs dilatometer tests according to the above mentioned Standards: dilatation and contraction of the sample are measured by means of precision transducer, while the thermal process is controlled by the electronic control unit.

With the dual furnace configuration, productivity is considerably increased due to the reduction of the heating and cooling waiting times.

The analysis procedure, including the insertion and removal of the tubes into the furnace, is automatic: the operator needs only load the sample and sample tubes, and to start the system. Once started, DL 4000 will preheat the furnace, insert the tubes into the furnace, raise the temperature at uniform rate, and carry out the test.

Furnace temperature together with dilatation and contraction readings are displayed and printed during the testing procedure.

From R.B. Automazione - Italy

Available through - LECO Australia Pty Ltd

4/10 Salisbury Road Castle Hill NSW 2154

PO Box 6006 Baulkham Hills BC NSW 2153

Ph: +61 2 9849 5900 Fx: +61 2 9894 5247

Email: australia@leco.com Web: www.leco.com.au