Instruments for Physical Testing of Coal

Dilatometer – DL 4000

The DL 4000 Dilatometer is an automated instrument for determining the swelling proprieties 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.


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.

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