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January 9, 1948

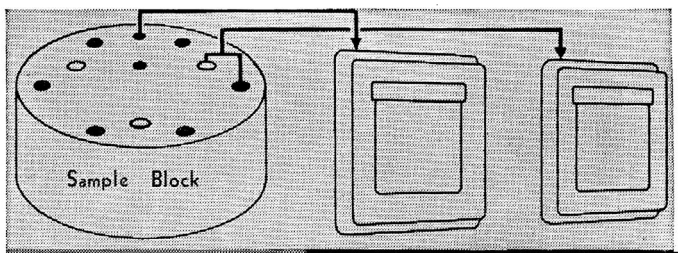
Science

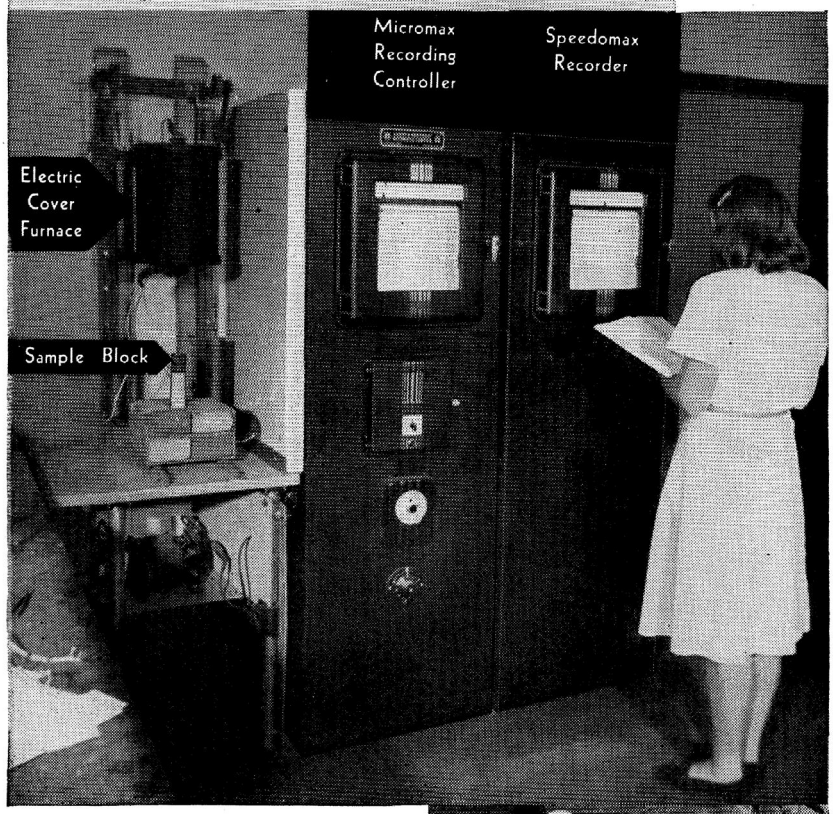
Presentation of the AAAS $1,000 Prize

Chicago, December 31, 1947

(See *News and Notes*)

Improved Method for DIFFERENTIAL THERMAL ANALYSES*

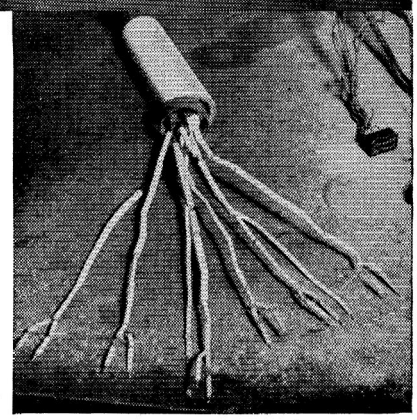




Shown at right is the set-up used by a geologist for analysis of clay. Electric furnace lowers over cylindrical block, in the face of which are holes containing six clay samples and three samples of thermally inert material and two holes—one operating, one spare—for control thermocouples. Special differential thermocouples have one junction in clay sample and one in inert material, and develop voltages proportional to the temperature differences between the two.

Speedomax consecutively records voltages from six such differential couples in 18 seconds. Micromax Program Controller employs usual-type thermocouple to detect sample block temperature and control rate of temperature rise of furnace.

Data from the two instruments are manually combined into temperature vs. temperature difference curves by plotting temperature from the Micromax record along the vertical axis of the Speedomax chart.



Speedomax offers fundamental advantages:

(1) By recording temperature difference from six samples in one furnace heat, it saves time during the test.

(2) Because the six records are printed on one chart, the geologist can make quick, accurate comparisons after the test is completed.

Micromax Program Controller, Duration-Adjusting Type, creates desired temperature rise regardless of variations in line voltage or ambient temperature.

For catalogs, or a personal call by an L&N engineer, as you prefer, address Leeds & Northrup Co., 4926 Stenton Ave., Philadelphia 44, P.

* *Kulp, J. L., Kerr, P. F., Science, Vol. 105, p. 413, 1947.*

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