SD-GA.11

CANADA

DEPARTMENT OF TRADE AND COMMERCE

STANDARDS DIVISION

OTTAWA, April 13, 1951.
(Apparatus Approved March 29, 1949)

NOTIFICATION OF TYPE APPROVAL

The apparatus specified herein has been duly approved by the Standards Division under the provisions of the Gas Inspection Act, Chapter 82, R.S. 1927, and may be admitted to verification in Canada.

Apparatus Approved: The Brown Mechanical Recording Integrating Flowmeter with Automatic Planimeter, manufactured by the Brown Instrument Company (Division of the Minneapolis-Honeywell Regulator Company, Ltd.), Philadelphia, Pa., U.S.A., and distributed in Canada by the Minneapolis-Honeywell Regulator Company, Ltd., Toronto, Canada.

Application: Measurement of fluids in conjunction with standard orifice plates.

Rating of Apparatus: Differential pressure ... up to 200 inches of water (approx.)
Working pressure ... 500, 1500, 2500 pounds per square inch.

Description: The single pen mechanical recording flowmeter with automatic planimeter, which this approval covers, consists essentially of:

(a) a mercury manometer having two legs of different diameters;

(b) a pen which records the differential pressure fluctuations on a circular chart;

(c) an integrator which integrates units of flow and time, and records the result on a counter;

(d) a planimeter pen which makes a mark on the edge of the chart to indicate each unit of flow integrated.

The diameter of the high pressure leg of the mercury manometer is fixed, but the low pressure leg may be obtained in several diameters. These low pressure chambers are called "range tubes", and are interchangeable so as to obtain a satisfactory reading on the charts for a variety of pressures. The charts, which are usually of the square root type, are calibrated to be used in conjunction with the appropriate range tube. The pen of the recorder is operated by a linkage from a float in the high pressure chamber. The position of the pen also indicates the amount of time a motor-driven disc makes contact with an integrator roller. Thus, the higher the indication of the pen arm, the more the integrator roller turns. When the integrator roller has made ten revolutions, an escapement disc permits the motor to move a cam, which, after one revolution, causes the planimeter pen to make a short radial mark near the edge of the chart and simultaneously causes the integrator counter to advance one figure.

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