CANADA
DEPARTMENT OF TRADE AND COMMERCE

S-GA.170

STANDARDS BRANCH

OTTAWA September 15, 1959.

TYPE APPROVAL

CUTLER-HAMMER TYPES "AB" and "ELECTRONIK"
RECORDING CALORIMETERS

The apparatus specified and illustrated herein has been duly approved by the Standards Branch under the provisions of the Gas Inspection Act, Chapter 129, R.S. 1952, and may be admitted to verification in Canada.

Apparatus Approved: Types "AB" and "Electronik" Recording Calorimeters manufactured and distributed in Canada by Cutler-Hammer Inc., Milwaukee 1, Wisconsin, U.S.A.

Range of Apparatus: Various ranges to 3600 BTU per cu. ft.

Application: Measurement in distribution service of manufactured, natural and petroleum gases, or mixtures thereof.

Description: The Calorimeter is a self-contained instrument requiring no arbitrary settings from other calorimeter readings. Testing means are provided in the instrument to readily check its accuracy. The basic principle of operation is as follows: Gas is burned at a constant rate and the heat developed is absorbed by a stream of air. The rates of flow of gas, combustion air, and heat absorbing air are regulated by water sealed metering devices geared together and driven by an electric motor, so that the ratio of gas to air is maintained constant. The products of combustion are kept separate from the heat absorbing air and are cooled very nearly to the initial tank temperature, so that the moisture formed in combustion is condensed to the liquid state. Thus the rise in temperature of the heat absorbing air is a measure of the heating value of the gas. The rise in temperature is measured by a pair of nickel wire resistance thermometers translated into BTU per standard cu. ft. of gas and automatically recorded on a chart. Both gas and heat absorbing air are measured at atmospheric pressure, both at the

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