DEPARTMENT OF CONSUMER AND CORPORATE AFFAIRS

STANDARDS BRANCH

Re: G.82

FILES: SL-100-123
SE-85-40
S-17-1

OTTAWA, July 15, 1971.

TECHNICAL GAS CIRCULAR G-71/3

TO: DISTRICT INSPECTORS OF ELECTRICITY AND GAS

FROM: CHIEF, ELECTRICITY AND GAS DIVISION

RE: Field Test Procedure for Canadian Meter Company Rotary CVM-T.C. Meters

Approval circular G-82 gives general description and basic data for these meters.

Before any verification of this meter can begin it will be necessary to remove the plastic cover containing the integrator assembly as well as the faceplate covering the last two digits of the counter registers. This will permit the registers to be read in increments of one cu. ft.

In order that the registered volumes by the meter can be read with sufficient precision, at least 500 cu. ft. should be allowed to pass through the meter during the test period.

The accuracy of the non-compensated registration of the meter may be checked with a L.P. flow prover, a transfer prover, or other approved flow standard measuring the uncorrected flow.

The accuracy of the temperature compensating unit may be checked at any constant temperature by comparing the volume registrations of the two counters on the meter. The meter is not required to be connected to any flow standard of comparison during this test.

The following data should be recorded:

a) Meter's registered volume at line conditions (uncorrected counter, V_u)

b) Meter's registered volume at base conditions (corrected counter, V_t)

c) Flowing gas temperature in °F (Tg).

This temperature should be measured at the inlet side of the meter with a calibrated thermometer and several readings should be taken during the test period in order to establish the average temperature correctly.

The true temperature correction factor (F_t) can be calculated as follows:

$$F_t = \left[\frac{460 + T_{base}}{460 + T_g}\right] = \frac{520}{(460+T_g)}$$

The error of the temperature compensation (E_t) in percent is given by:

$$E_t = \left(\frac{V_t - V_u \times F_t}{V_u \times F_t}\right) \times 100$$

Acceptable tolerance is ±2%.

W.J.S. Fraser

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