



DEPARTMENT OF TRADE AND COMMERCE
STANDARDS BRANCH

G-8

OTTAWA May 17 1965

NOTICE OF APPROVAL

FOR

INDUSTRIAL INSTRUMENT CORPORATION, MODEL 802, SERIES 800
DIFFERENTIAL PRESSURE RECORDER

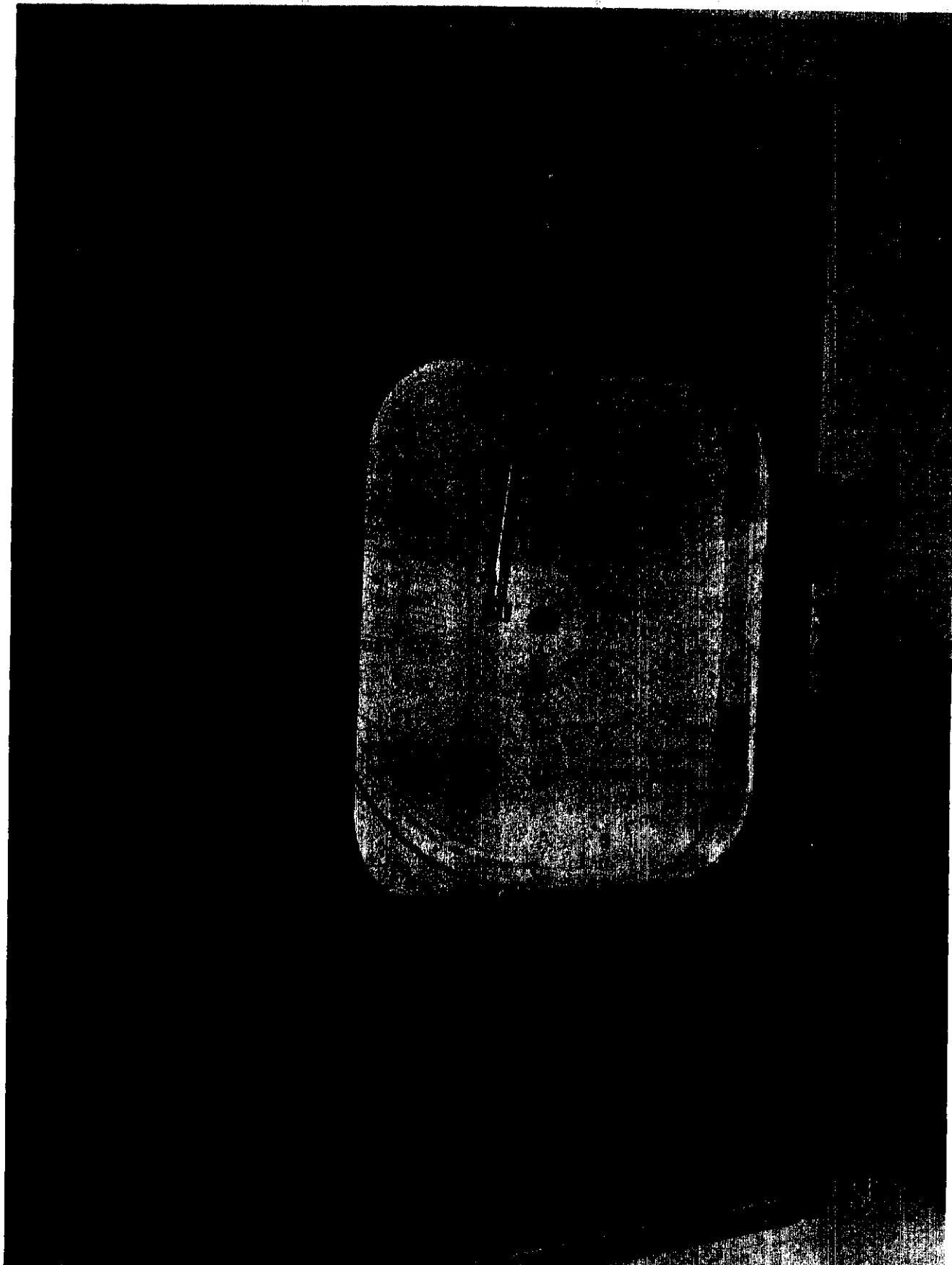
Apparatus

Differential pressures	0-20, 0-50, 0-100, 0-150, 0-200, 0-300, 0-400, 0-500 inches water gauge.
Static pressure	0-15 p.s.i. through 0-6000 p.s.i.
Working pressure	Housing material
1000 p.s.i.	Aluminum, brass or bronze
1000 & 1500 p.s.i.	Forged 1030 steel
2500 p.s.i.	Forged type 316 stainless steel
3000 & 6000 p.s.i.	Forged 4140 steel
6000 p.s.i.	Forged type 316 stainless steel
Bellow material	316 stainless steel or monel

Description

Industrial Instrument Corporation Model 800 Differential Pressure Unit is used with all I.I.C., Model 802, D.P. Recorders. This approval covers either single pen recorders for differential pressure measurements only, or two pen recorders when an I.I.C. Pressure Element is added to actuate the static pressure pen.

The operation of the differential pressure element unit is based on the interaction of two opposed bellows attached to a machined centerplate. The space, enclosed by the two bellows, is fluid filled. A bimetal compensator fixed in the high pressure bellows controls the expansions and contractions of the bellows and so compensates for ambient temperature changes. Bearings are of the non-freezing type and do not require lubrication. Pressure from the actuating source is introduced to both sides of the bellows system through either set of taps in the high and low pressure housings. When pressures on both high and low pressure bellows are equalized, the unit remains at zero.



Description (continued)

As differential pressure increases, the high pressure bellows tends to collapse, forcing the fluid through the pulsation dampener passage around the over-range valves into the low pressure bellows. This causes the low pressure bellows to expand and the attached shaft to move outward. Through a linkage, the linear motion of the shaft is converted into an angular motion of the bearing shaft. Movement of the fluid from the high pressure into the low pressure bellows continues until the force created by the differential is equalled by the tension on the range springs and the spring force of the bellows proper. This unit is equipped with a pulsation dampener, over-range valve and temperature compensation. Range springs may be changed to alter the range of the instrument.

Any suitable approved type mechanical or electrical chart drive with a rotational period of 24 hours or 7 days may be used with this recorder.

The case for the 800 series instruments is heavy die cast aluminum, rectangular in shape. A large square window is provided for viewing the 12" circular chart.

Approval granted to:- Baker Instruments Limited,
185 Davenport Road, Toronto 5, Ontario.

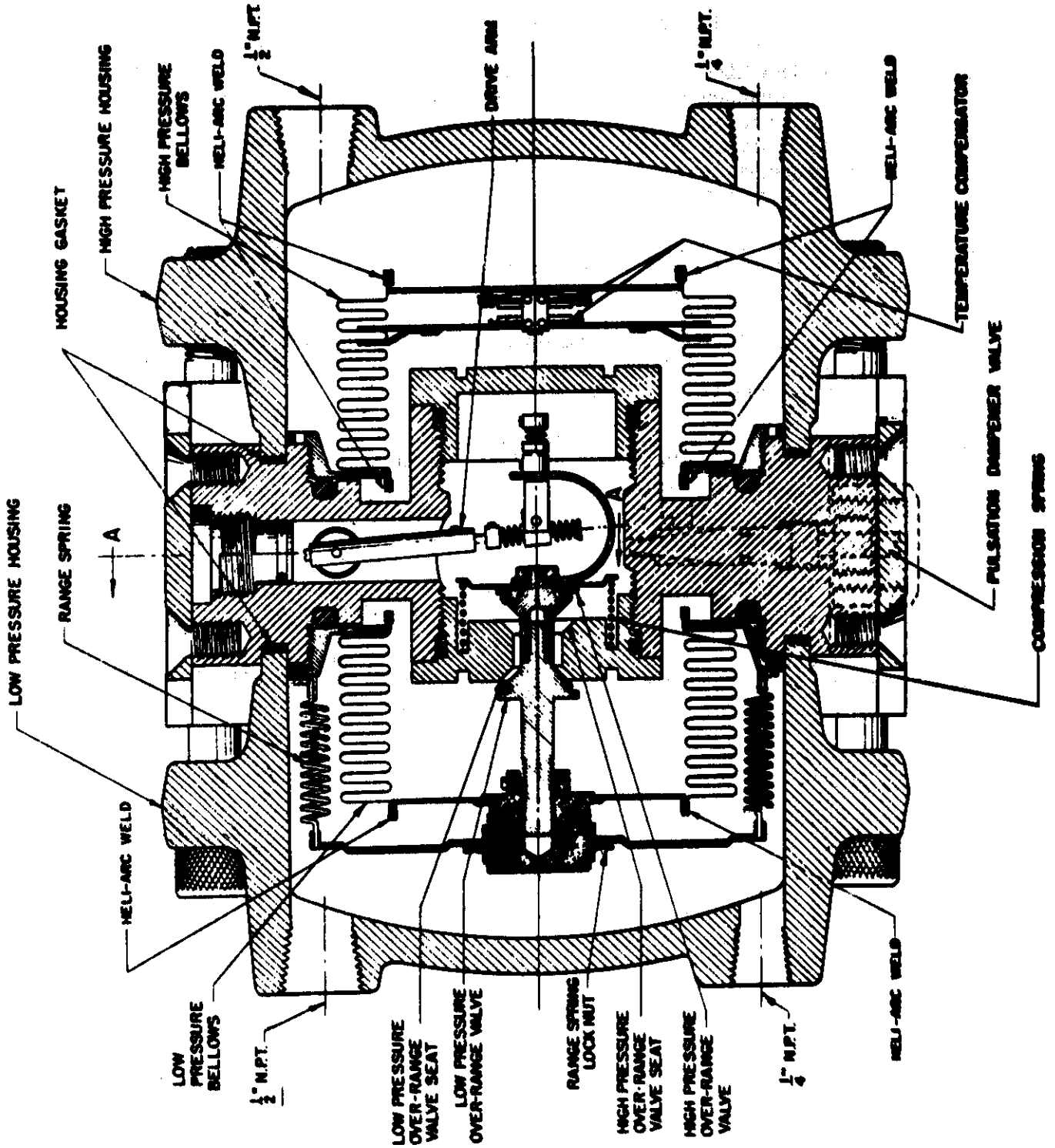
W. J. S. Fraser
W. J. S. Fraser,
Chief, Standards Laboratory,
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Chief, Electricity & Gas Division,
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Ref: SL-100-92

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ILC MODEL 802 UNIT