TECHNICAL STANDARDS & SAFETY AUTHORITY
14th Floor, Centre Tower
3300 Bloor Street West
Toronto, Ontario
Canada M8X 2X4

Show facsimile of manufacturer's logo or trademark, as it will appear on the fitting, in the space below

invensys
Foxboro

STATUTORY DECLARATION
Registration of Fittings

I, Normand E. Provost, Manager, Product Compliance and Safety
(Name and Position, e.g. President, Plant Manager, Chief Engineer)

of Invensys Systems Inc.
(Name of Manufacturer)

Located at 38 Neponset Ave, Building N03-1A, Foxboro, MA 02035, USA 508-549-3238 1-508-549-3684
(Plant Address) *(Telephone No.)* *(Fax No.)*

☑ do solemnly declare that the fittings listed hereunder, which are subject to the ***Technical Standards and Safety Act***, Boilers and Pressure Vessels Regulation, comply with all of the requirements of CAN/CSA C22.2 No. 61010-1
(Title of recognized North American Standard)
which specifies the dimensions, materials of construction, pressure/temperature ratings, identification marking the fittings and service;

☐ or are not covered by the provisions of a recognized North American standard and are therefore manufactured to comply with _____ as supported by the attached data which identifies the dimensions, material of construction, pressure/temperature ratings and the basis for such ratings, the marking of the fitting for identification and service.

I further declare that the manufacture of these fittings is controlled by a quality system meeting the requirements of ISO 9001:2008 which has been verified by the following authority, DET NORSKE VERITAS.
The items covered by this declaration, for which I seek registration, are category F type fittings. In support of this application, the following information and/or test data are attached as follows:
FM Test report ID 3014762 and Foxboro CQA Report 99-7009
(drawings, calculations, test reports, etc.)

Declared before me at INVENSYS SYSTEMS INC **in the** County **of** NORFOLK
the 10th **day of** APRIL **AD 20** 13.

Commissioner for Oaths:
VIRGINIA R KRAUS
(Printed name)
Virginia R Kraus
(Signature)

Normand Provost
(Signature of Declarer)

FOR OFFICE USE ONLY

To the best of my knowledge and belief, the application meets the requirements of the ***Technical Standards and Safety Act***, Boilers and Pressure Vessels Regulation, and CSA Standard B51 and is accepted for registration in Category F.

CRN: 0F8632.5R1

Registered by: K. Klein

Dated: April 24/13

NOTE: This registration expires on April 24/2023

Technical Standards and Safety Authority — Boilers and Pressure Vessels Safety Program
REGISTERED
C.R.N. 0F8632.5R1
Signed: K. Klein
Date: April 24/13

PV 09553 (06/04)

Scope of registration: Per lines 3.A to 3.F in attached stamped sheets. - MAWP's & Material per attached stamped sheets. KK 4/24/13

1. Description of Equipment Under Test

1.1 IDP10 transmitter sensor assembly that forms the pressure containment envelope included assemblies with the following combinations of process cover and fastener materials: #

Process Covers:	Bolt Materials:
Carbon Steel 13Q per ASTM A732	Carbon Steel per ASTM A193 B7 (standard fastener)
316 SST CF8M per ASTM A351	17-4PH SST per ASTM A564 (option –B2)
Hastelloy C CW-2M per A494	Carbon Steel per ASTM A193 B7M (option –B3)
Monel M-35-1per ASTM A494	

1.2 IGP10 maximum rated pressure sensor assembly of 6000 psig. ##

1.3 Flow assemblies IFO, IFOU and IFOA as follows:

IFO-S2.-. Integral Flow Orifice, In-Line Type

IFOU-S2-.. IFOU Integral Flow Orifice, Used with d/p Transmitters

IFOA –01S7… 1 inch class 600 IFOA Integral Flow Orifice Flanged Assembly

IFOA –1HS6… 1-1/2 inch class 300 IFOA Integral Flow Orifice Flanged Assembly

IFOA –0HS2… ½ inch IFOA Threaded

IFOA –01S2… 1inch IFOA Threaded

IFOA –1HS2… 1 ½ inch IFOA Threaded

#Note: The pressure containment construction tested is also common IDP25, IDP50, IGP20, IAP20, IMV25 and IMV30 transmitters.

##Note: The pressure containment construction tested is also common to IGP10-…C, D, E & F ranges, IAP10, IGP50, IGP25, IPI10 and 880SGA transmitters.

2. Objective

Proof test to four times or greater the maximum rated working pressure of each transmitter group.

3. Test Results Summary

Test Setup: Assemble each transmitter, fill with water, attach to a pressure source, apply hydrostatic pressure and record the maximum obtainable pressure that the transmitter can withstand.

Test Requirement: To subject the equipment under test (EUT) to a minimum of 4 times or greater the maximum rated working pressure for a duration period of one minute.

A. **Differential and Bracket-Mounted Pressure Transmitters:** Test sample: IDP10 applicable for IDP10,IDP25,IDP50,IGP20,IAP20,IMV30,IMV25 (Ref: PSS 2A-1C14C, K, L; 2A-1C13A;2A-1C15A & B)

Maximum Working Pressure with Bolting Selections: B7 or 17-4PH=3625 PSI. B7M bolts = 2900 PSI.

4X Maximum Working Pressure: B7 or 17-4PH =14500 PSI. B7M =11600 PSI.

Transmitter Process Cover Material	Maximum Proof Pressure Obtained (PSI) with Bolting Options		
	Standard, (ASTM A193, Grade B7) Bolts	Option –B2, (ASTM A564, Type 17-4 PH) Bolts	Option –B3, ASTM A193, Grade B7M Bolts
Carbon Steel	14500	16800	*
Gasket Failure (PSI)	16000	17000	11250
Stainless Steel	14700	16500	11000
Gasket Failure (PSI)	15300 (Held 25 Sec.)	17100 (Held 30 Sec.)	11250
Hastelloy	14700	15900	*
Gasket Failure (PSI)	15300 (Held 5 Sec.)	16500 (Held 15 Sec.)	10800
Monel	12600	12000	10200
Gasket Failure (PSI)	13500	12600 (Held 40 Sec.)	10800 (Held 5 Sec.)

* **NOTE:** For these test four times the maximum working pressure could not be obtained before gasket failure occurred.

3. Test Results Summary (Cont'd)

B. Gauge & Absolute Transmitters: Test sample: IGP10-...C, D, E & F. Qualified by similarity of construction are: IGP25, IGP50, IAP10, IP!10, 880SGA (Ref: PSS 2A-1C13A, H, G & 1-4A2)

Maximum Working Pressure (PSI)	4X Maximum Working Pressure (PSI)	Maximum Proof Pressure Held For One minute (PSI)	Test Equipment Limit
6000	24000	28000	29000*

*** NOTE:** the highest pressure reached due to limitations of the test equipment.

C. IFO Integral Flow Orifice, In-Line Type Test sample: IFO-S2.-., (Ref: PSS 3-5A1D)

Maximum Working Pressure (PSI)	4X Maximum Working Pressure (PSI)	Maximum Proof Pressure Obtained (PSI)	Gasket Failure Pressure (PSI)
3625	14500	14500	15600

D. IFOU Integral Flow Orifice , Used with d/p Transmitters Test sample: IFOU-S2-.. , (Ref: PSS 3-5A1C)

Maximum Working Pressure (PSI)	4X Maximum Working Pressure (PSI)	Maximum Proof Pressure Obtained (PSI)	Gasket Failure Pressure (PSI)
3000	12000	12300	12300

3. Test Results Summary (Cont'd)

E. **IFOA Integral Flow Orifice Flanged Assembly** Test samples: IFOA –01S7… & IFOA –1HS6…, (Ref: PSS 3-5A1B)

Size (Inch)	Maximum Working Pressure (PSI)	4X Maximum Working Pressure (PSI)	Maximum Proof Pressure Obtained (PSI)	Gasket Failure Pressure (PSI)
1 (Class 600)	1440	5760	6300	6300
1-1/2 (Class 300)	750	3000	3000	3000

F. **IFOA Thread Flanges** Test samples: IFOA –0HS2…, IFOA –01S2…& IFOA –1HS2… (Ref: PSS 3-5A1B)

Size (Inch)	Maximum Working Pressure (PSI)	4X Maximum Working Pressure (PSI)	Maximum Proof Pressure Obtained (PSI)	Gasket Failure Pressure (PSI)
½	3000	12000	12000	12000
1	2000	8000	*	8000 (For 30 Seconds)
1-1/2	1440	5760	*	6000 (For 15 Seconds)

* **NOTE:** For these test the maximum pressure could not be maintained for one minute before gasket failure occurred.