



14th Floor, Centre Tower
3300 Bloor Street West
Toronto, Ontario
Canada M8X 2X4
Tel.: 416.734.3300
Fax: 416.231.1626
Toll Free: 1.877.682.8772

www.tssa.org

January 05, 2012

MATT MCNAMARA
ARMSTRONG INTERNATIONAL
816 MAPLE ST
THREE RIVERS MI 49093
US

Service Request Type.: BPV-National CSA
Service Request No.: 684796
Your Reference No.: CAT H FITTING- PUMP TRAP-PT-104

Dear MATT MCNAMARA,

Please find enclosed the original response from MB, SK, QC registered under the CRN No.: CSA-0H14860.56.

As all jurisdictional fees are handled by the Technical Standards and Safety Authority (TSSA), you do not pay any jurisdictions directly. However, once your design has been successfully registered in all of the requested jurisdictions, you may receive an invoice from TSSA for any outstanding jurisdictional fees.

Should you have any questions or require further assistance, I will be happy to assist you. When contacting TSSA regarding this file, please refer to the Service Request number provided above.

Yours truly,

Colleen Ratcliff
Administrative Assistant_ BPV Engineering
Tel. : 416-734-3497
Fax : 416-231-6183
Email : CRatcliff@tssa.org



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



STATUTORY DECLARATION Registration of Fittings

I, Andy Schirk, QA Manager
(Name and Position, e.g. President, Plant Manager, Chief Engineer)

of Armstrong International Inc
(Name of Manufacturer)

Located at 816 Maple St., Three Rivers, MI 49093 269-273-1415 269-278-6555
(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
ASME B31.3

(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 ISO9001:2008 which has been verified by the following authority, HSB Registration Services

The items covered by this declaration, for which I seek registration, are category H type fittings. In support of this application, the following information and/or test data are attached as follows:
drawings pt104, tensile test reports, burst test report, calculation

(drawings, calculations, test reports, etc.)

Declared before me at Three Rivers, MI in the County of St. Joseph
the 1st day of August AD 20 11.

Commissioner ROBERTA M. RYAN
Notary Public, St. Joseph County, MI
My Commission Expires Sept. 13, 2011
(Printed name)

Roberta M. Ryan
(Signature)

Andy Schirk
(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 H

CRN: CSA-0414860.56
Registered by: Bikramjit S. Sandhu, P.Eng
Dated: 16 Nov. 2011

NOTE: This registration expires on Oct 28, 2021

CSA INTERNATIONAL

REGISTERED

C.R.N.: CSA-0414860.56

Signed: Bikramjit Sandhu

Date: 16 Nov. 2011

178 Rexdale Blvd., Toronto, ON M9W 1R7

***Note:** See the attachment for the scope of the registration

DIMENSIONS & DATA CERTIFIED FOR:

Representative:

Order:

Customer:

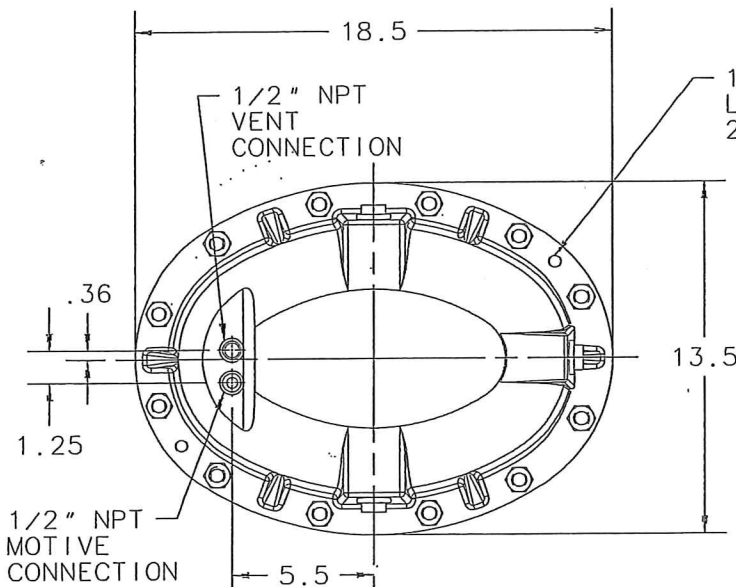
Order:

Project:


Requirements:

By:

Date:



1/2" -13 LIFTING LUG CONNECTION 2 PLCS.

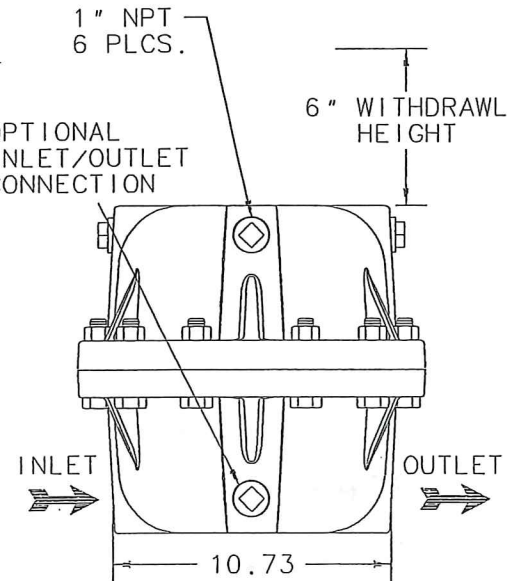
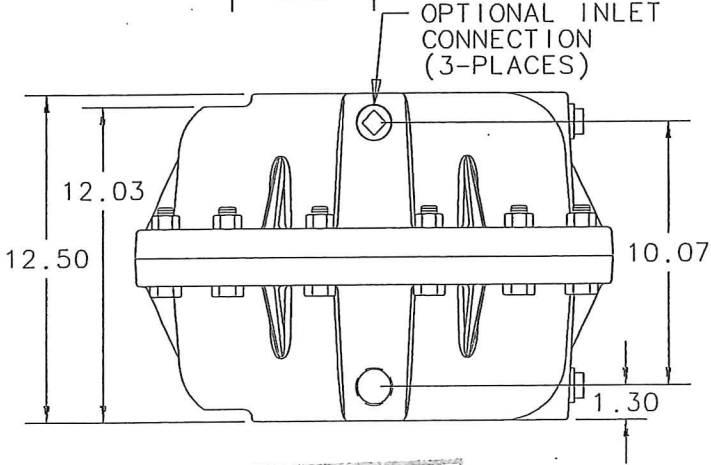

CANADIAN STANDARDS ASSOCIATION

ATTACHMENT TO *pg 1 of 2*


CRN CSA-0414860-56

SIGNED *Bekramjit Sandhu*

178 Rexdale Boulevard, Toronto, ON Canada M9W 1R3



THIS IS PART OF
CRN 0414860-5
 Technical Standards & Safety Authority
 Boilers & Pressure Vessels
 Safety Division

 Armstrong	Armstrong Fluid Handling, Inc. Three Rivers, MI. 49093 Telephone (269) 278-6500 Fax (269) 279-3150		
	Product	CDF No.	Date
PUMP TRAP PT-104	CDF 1028	10/9/02	Rev. B



Armstrong Steam and Condensate Group

816 Maple St, Three Rivers, Michigan 49093 - U.S.A. Phone: (269) 273-1415 • Fax: (269) 278-6555

July 7, 2011

Re: Burst Calculation

Product: PT104

Body Material: Cast Iron per ASTM A48 CL 30

Bolting Material: Carbon Steel, SA449

Design conditions: 90 psi at 406 F

$$(P1)(7.5)(AT/MT) = P2$$

P1 = pressure rating of casting

7.5 = safety factor

AT = average tensile strength of test bars

MT = spec tensile strength

Given: castings were hydro-tested to 960 psi

Tensile strength: $41,300 + 40,900 + 40,900 + 39,600 + 42,000 / 5$

Average tensile strength: 40,900 psi

$$(P1)(7.5)(33,869 / 30,000) = 960$$

P1 = 93 psi

Criteria

P1 > 90 satisfied

