ROUND ENGINEERING INC.
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WATERDOWN, ONTARIO
L0R 2H6
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PRESSURE VESSEL, FITTING AND PIPING SYSTEMS 101

An Introduction to Canadian Registration Numbers **(CRN's)** and the ASME and CSA Codes used in the Design, Manufacturing and Sales of Pressure Vessels, Fittings and Piping Systems in Canada

SCOTT ISLIP, P.ENG
ROUND ENGINEERING INC.

Last Revised
April 27, 2014

Canadian Registration Number (CRN)

- **CSA B51**

  - Used to determine when a CRN is required

  - If the design pressure is less than or equal to 15 psig then a CRN is **NOT** required.

  - If design pressure is greater then 15 psig then a **CRN may or may not be required.**

  How can you check if a CRN is Required for Pressure Vessels and Fittings?

  - Liquids not more Hazardous than water: CSA B51 Figure 1(a)

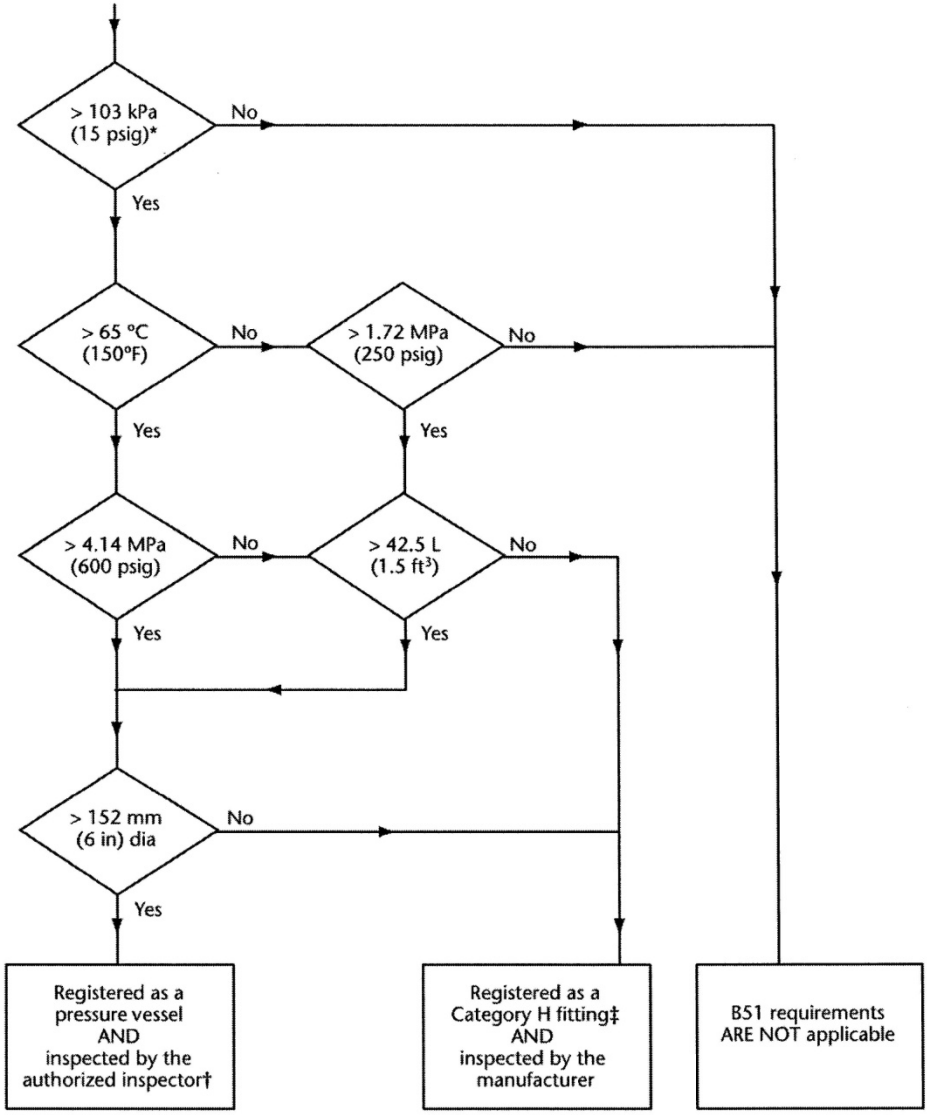
  - Non-lethal gas or vapour or a non-lethal liquid not covered by Figure 1(a): CSA B51 Figure 1(b)

  - Lethal Substance: CSA B51 Figure 1(c)

  How can you check if a CRN is Required for Piping?

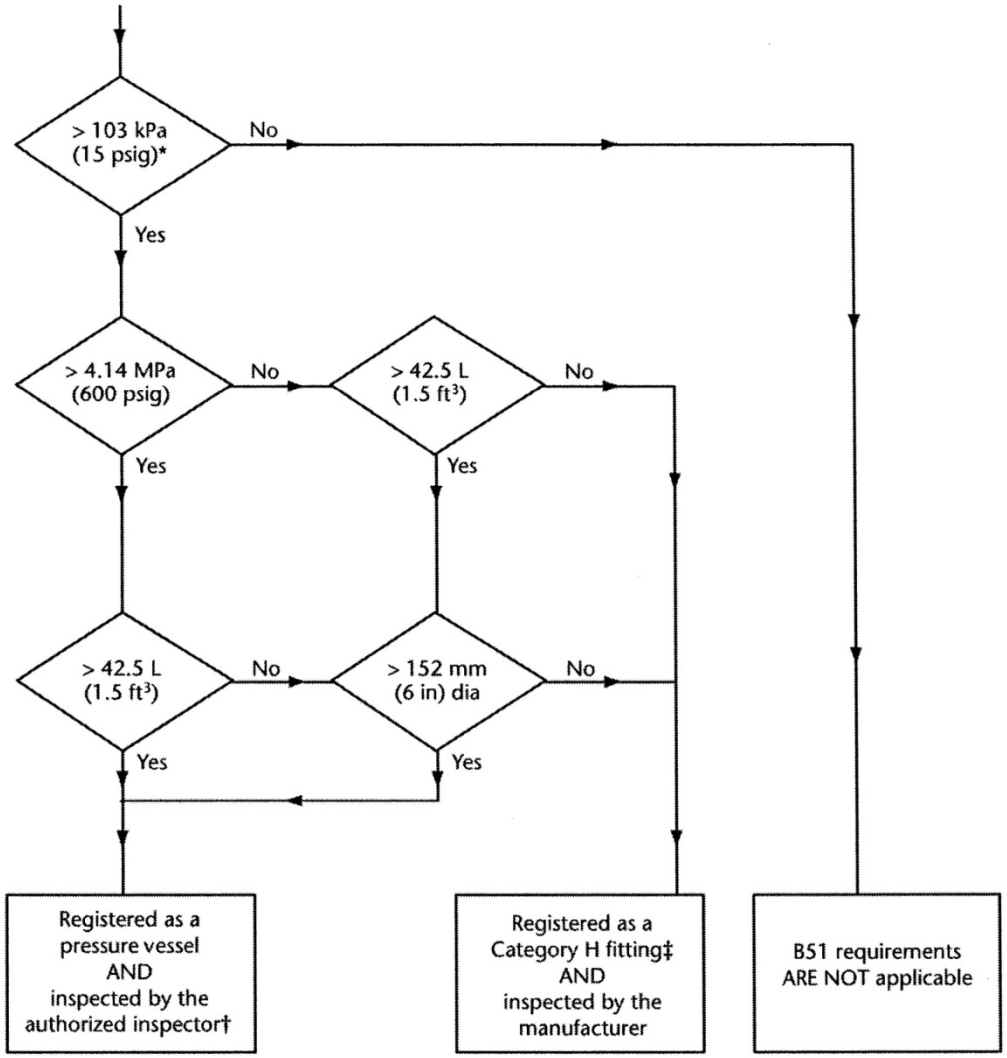
  - **??????????**. It is complicated and changes drastically between provinces/ jurisdictions. Ontario is only discussed in this presentation.

Last Revised April 27, 2014



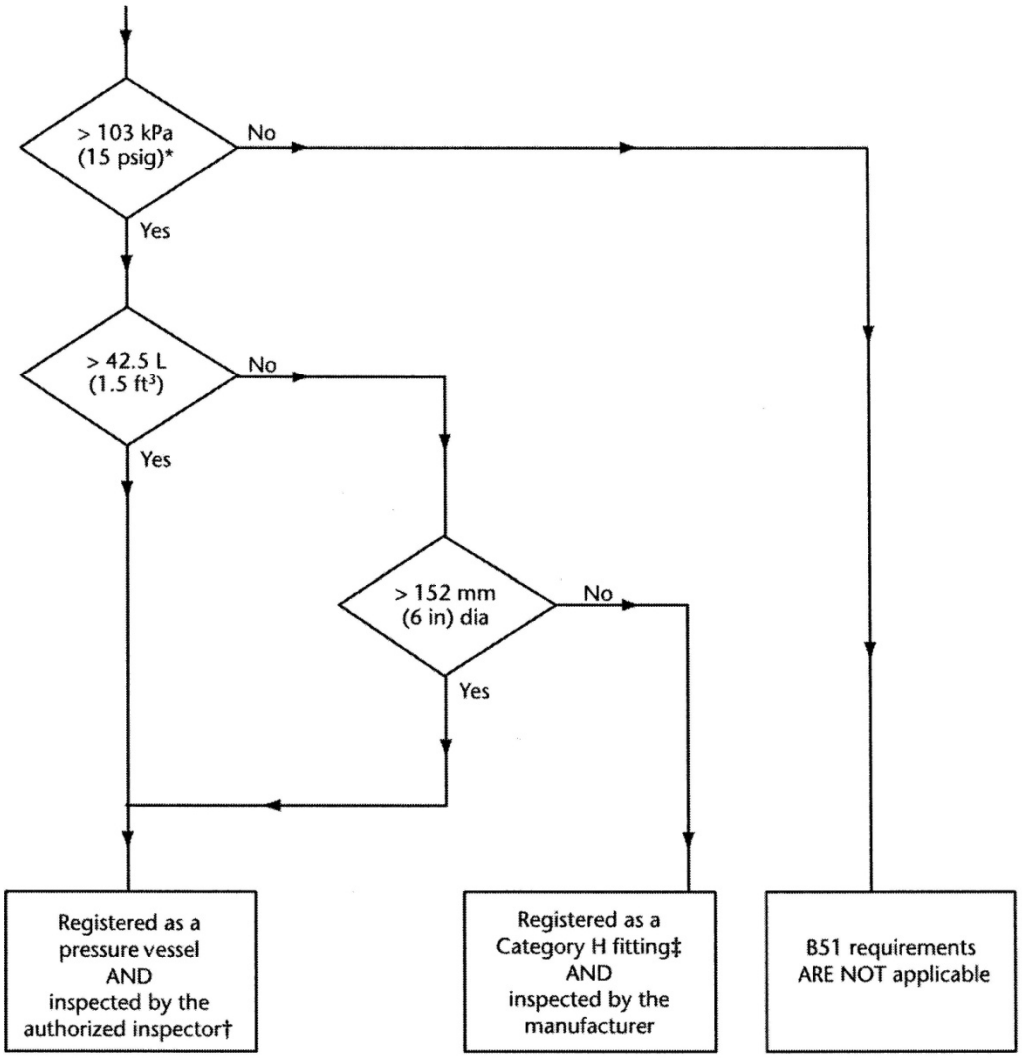
**Maximum allowable working pressure (MAWP).*
†See Clause 4.8.2 for exceptions to inspection requirements.
‡See Table 1.

Figure 1(a)
Registration and inspection requirements for pressure vessels (and pressure vessels registered as Category H fittings) for liquid service with liquids not more hazardous than water
(See Clauses 4.1.1 and 4.8.2, Table 1, and Figure 1(b).)



**Maximum allowable working pressure (MAWP).*
†See Clause 4.8.2 for exceptions to inspection requirements.
‡See Table 1.

Figure 1(b)
Registration and inspection requirements for pressure vessels (and pressure vessels registered as Category H fittings) containing a non-lethal gas or vapour or a non-lethal liquid not covered by Figure 1(a)
(See Clauses 4.1.1 and 4.8.2 and Table 1.)



**Maximum allowable working pressure (MAWP).*
†See Clause 4.8.2 for exceptions to inspection requirements.
‡See Table 1.

Figure 1(c)
Registration and inspection requirements for pressure vessels (and pressure vessels registered as Category H fittings) containing lethal substances
(See Clauses 4.1.1 and 4.8.2 and Table 1.)

Canadian Registration Number (CRN)

- **What is a CRN Number?**
  - A CRN number is issued by a Canadian Jurisdiction and covers either pressure vessels, fittings or pressure piping.

CANADIAN REGISTRATION NUMBER FEATURES

1	2	3	4	5	6	6A		7	8
	LETTER	#	#	#	#	#	.	#	#

POSITION 1	- For fittings, this position has a zero "0" placeholder. - For Pressure Vessels, this position is blank. - For Ontario Pressure Piping this position is blank.
POSITION 2	- For fittings, this position holds the category of the fitting. - For Pressure Vessels, it holds a assigned letter. - For Ontario Pressure Piping, this position holds a "P"
POSITION 3,4,5,6	A unique number issued by the initial jurisdiction that approved the design.
POSITION 7	- # Representing the first jurisdiction that approved the design.
POSITION 8	- # Representing additional Jurisdictions that have approved the design.

Position 7 and 8 are not applicable to Piping.

Last Revised
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Table 1
Categories of fittings

(See Clauses 4.1.1, 4.2.2, 4.2.5, 4.9.2, 5.1.1, and 11.2 and Figures 1(a), (b), and (c).)

Category	Type of fitting
A	Pipe fittings, including couplings, tees, elbows, wyes, plugs, unions, nipples, pipe caps, and reducers
B	All flanges
C	All line valves
D	All types of expansion joints, flexible connections, and hose assemblies
E	Strainers, filters, separators, and steam traps
F	Measuring devices, including pressure gauges, level gauges, sight glasses, levels, and pressure transmitters
G	Certified capacity-rated pressure-relief devices acceptable as primary overpressure protection on boilers, pressure vessels and pressure piping, and fusible plugs
H	Pressure-retaining components that do not fall into Categories A to G

Notes:

(1) *These categories do not take into account size, materials, end connections, ratings, schedules, and methods of fabrication.*

(2) *Category H can include*

(a) small pressure vessels registered and inspected as specified in Figure 1(a), (b), or (c); or

(b) a series of components (including piping components) joined together to form a single fitting, provided that the diameter of any component does not exceed 152 mm *(6 in) and the total volume of the fitting does not exceed* 42.5 L *(1.5 ft^3).*

4.3.2

When a design that is registered in a province is subsequently registered in other provinces, additional digits or letters identifying those provinces shall be added after the digit or letter representing the original registering province. The following identifications shall be used:

1	British Columbia	6	Québec	T	Northwest Territories
2	Alberta	7	New Brunswick	Y	Yukon
3	Saskatchewan	8	Nova Scotia	N	Nunavut
4	Manitoba	9	Prince Edward Island		
5	Ontario	0	Newfoundland and Labrador		

Notes:

(1) *For example, a design registered in Ontario and allotted the registration number K4567 will be registered as CRN K4567.5. If this design is subsequently registered in Alberta, the CRN will be K4567.52; and if afterwards registered in Manitoba, the CRN will be K4567.524.*

(2) *If a design is registered in all provinces and territories, the CRN stamped on the nameplate and marked on the data report may be shortened to include the designation of first registration plus the letter "C", e.g., K4567.5C.*

(3) *If a design is registered in all provinces and territories that require registration but not in provinces and territories that do not require registration, the CRN may be shortened to include the designation of first registration plus the letters "CL", e.g., K4567.5CL. (The "L" means limited.)*

Canadian Registration Number (CRN)

- **How to get a Pressure Vessel CRN Number?**

  - The Manufacturer must have a quality system implemented that meets the requirements of CSA B51 “Manufacturing of Pressure Vessels in accordance with ASME VIII-1 certification or an ASME U-Stamp.

  The following technical information is to be submitted to the jurisdiction where the CRN is being applied for:

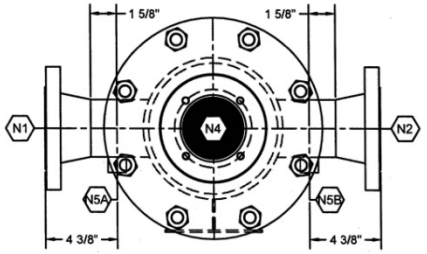
  – Design Drawings showing as a minimum the following information
    - Service
    - MAWP or Design Pressure
    - Design temperature
    - Design Code
    - Material Specifications
    - Material Thickness
    - Corrosion Allowance
    - Welding Details
    - NDE Examination Requirements
    - PWHT Requirements
    - Impact Test Requirements
    - Test Pressure and Temperature
    - Special Service Conditions (i.e. Cyclic service, etc.)

  - Design Calculations

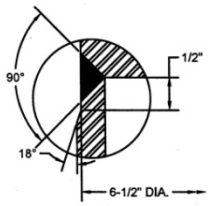
PRESSURE VESSELS FOR ONTARIO MUST BE REVIEWED BY AN ONTARIO P.ENG. DRAWINGS AND CALCULATIONS NEED TO BE ONTARIO P.ENG STAMPED PRIOR TO SUBMISSION TO THE TSSA.

PRESSURE VESSELS CRN’S LAST INDEFINITELY OR UNTIL THE DESIGN IS CHANGED. PRESSURE VESSELS CRN’S NEED NOT BE REGISTERED IN THE NAME OF THE MANUFACTURER.

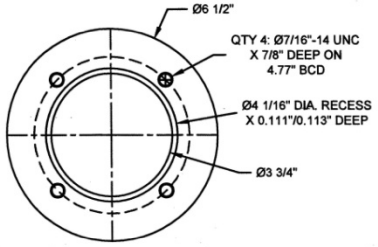
EXAMPLE DRAWING SUBMITTED AND ACCEPTED FOR CRN IN ALBERTA



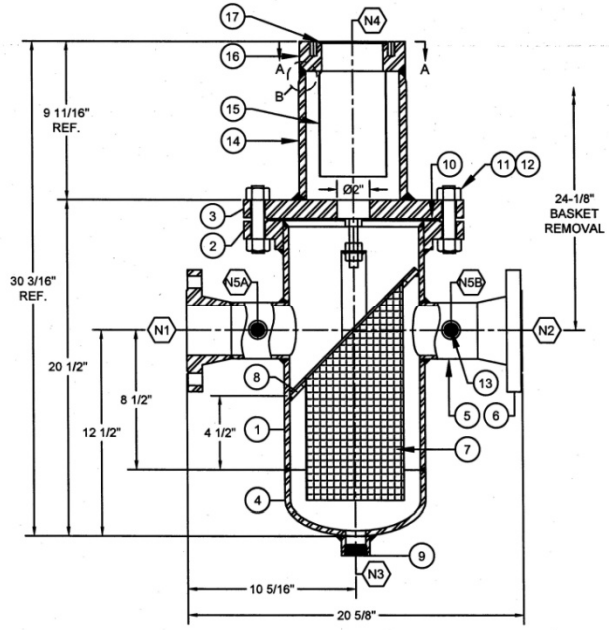
VIEW A-A

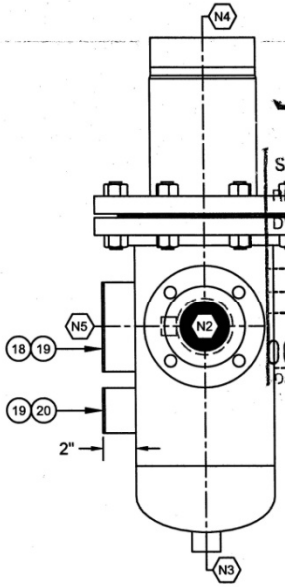


DETAIL B



ITEM 16 DETAIL





Bill of Materials			
Item	Description	Material	Qty
1	SHELL	8" SCH. 40 SA106-B PIPE X 14.88" LG.	1
2	BODY FLANGE	8" 150 LB. RFSO FLANGE C.STEEL SA105	1
3	COVER FLANGE	8" 150 LB. RF BLIND FLANGE C.STEEL SA105 C/W 2" DIA. CENTER HOLE	1
4	SHELL HEAD	8" SCH. 40 SA234-WPB WELD CAP	1
5	N1, N2 PIPE	3" SCH. 40 SA106-B PIPE X 4" LG.	2
6	N1, N2 FLANGE	3" SCH. 40 150 LB. RFWN FLANGE C.STEEL SA105	2
7	BASKET	1/8" DIA. PERF. (40% OA) C/W 60 MESH LINER - TYPE 304 SS - SEE SHEET 3	1
8	BODY RING	1/4" THK. C.STEEL SA36 - SEE SHEET 3	1
9	N3 COUPLING	1" 3000 LB. NPT HALF COUPLING C.STEEL SA105 C/W PLUG	1
10	GASKET	8" 150 LB. SPIRAL WOUND 304 SS WINDINGS GRAPHITE FILLED	1
11	COVER STUDS	3/4" X 4-1/4" LONG C.STEEL STUDS SA193-B7	8
12	COVER NUTS	3/4" X C.STEEL HHX NUTS SA193-2H	16
13	N5A, N5B COUPLING	1/2" 3000 LB. NPT HALF COUPLING C.STEEL SA105 C/W PLUG	2
14	AIR ELIM. BODY	6" SCH. 80 SA106-B PIPE X 7.88" LONG (SEE DETAIL B)	1
15	AIR ELIM. SLEEVE	4-1/8" OD X 6-7/16" LONG X 0.032"/0.040" THK. C.STEEL - BY OTHERS - NON PRESSURE RETAINING	1
16	MOUNTING FLANGE	1-13/16" THK. X 6-1/2" OD C.STEEL (SEE DETAIL) - MATERIAL TO BE SA106-B OR SA516-70 C.STEEL - BY OTHERS	1
17	O-RING	ELASTOMER	1
18	NAMEPLATE BRACKETS	1/8" THK. SA36.C.STEEL	2
19	ROUNDENG NAMEPLATE	ROUND ENGINEERING - TYPE 304 SS (SEE SHEET 2)	1
20	CODE NAMEPLATE	IN ACCORDANCE WITH UG-116 OF ASME VIII-1 (SEE SHEET 2)	1

ABSA

SAFETY CODES ACT - PROVINCE OF ALBERTA

REG. No W2980.2

DWG No R-0311 SHT 1 of 3 Rev. 1,0,0

MAWP kPa	Design Temp. °C
1965/FV	-29/150

ACCEPTED

Signed

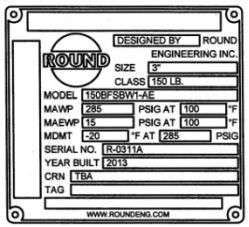
OCT 09 2013

Date

ZANA RADISAVLJEVIC, P.E.

DESIGN ENGINEER

Notes:
1. All dimensions are in inches. SI units if provided are in brackets.
2. All nozzle bolt holes straddle the major centerlines unless specifically noted.
3. All nozzle gasket surfaces require a serrated finish per ASME B16.5.
4. All welds to be neat in appearance, free of slag and other debris.
5. Item to be cleaned of scale, oil, weld splatter and all foreign matter prior to hydrostatic test.
6. Inside nozzle corners to have a minimum ⅛" radius.
7. Impact test exempt per UCS-66.
8. Fabricator to be certified to CSA-B51 and be authorized for shop fabrication of pressure vessels, pressure fittings and pressure piping per ASME Section VIII, Div.1, ASME B31.3 and ASME B31.1.
9. Item 14 to 16 and 14 to 3 weld to be MT examined before and after welding in accordance with UG-93(d)(3)



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NAMEPLATE DETAIL

DESIGN DATA					
VESSEL CODE	ASME VIII-1, 2010, A11	INTERNAL DESIGN	285 PSIG AT 100 °F	WPS	TBA - PER ASME IX
PIPE CODE	N/A	EXTERNAL DESIGN	15 PSIG AT 100 °F	PWHT	NONE
CODE STAMP	CRN VESSEL, UM	MDMT	-20 °F	WEIGHT DRY	180 LBS.
CRN NUMBER	TBA ABSA	HYDROTEST PRESS	371 PSIG FOR 10 MIN.	WEIGHT FULL	223 LBS.
WIND CODE	N/A	CORROSION ALLOW.	0.0625"	VOLUME	5 USGAL (0.7 FT^3)
SEISMIC CODE	N/A	RADIOGRAPHY	NONE	INTERNAL FINISH	NONE
IMPACT TEST	NONE	MT / PT	SEE NOTE 9 & SHT 2	EXTERNAL FINISH	PRIMER

CONNECTION DATA		
INLET (N1)	3" ANSI 150 LB. RF	
OUTLET (N2)	3" ANSI 150 LB. RF	
DRAIN (N3)	1" FNPT	
VENT (N4)	CUSTOM FLANGED	
DIFFERENTIALS (N5)	1/2" FNPT	

FILTRATION DATA	
FILTRATION LEVEL	60 MESH
APPROX. FILTER GROSS AREA	223 SQ. IN.
APPROX. FILTER OPEN AREA	33.87 SQ. IN.
RATIO: OPEN AREA / PIPE AREA	4.58 / 1

REV.	DESCRIPTION	DATE	INITIALS
1	REVISED ITEM 16	OCT. 18, 2013	SI

UNLESS OTHERWISE NOTED
1. DIMENSIONS ARE IN INCHES. IF USED SI UNITS ARE IN ( ) BRACKETS.
2. TOLERANCES
FRACTIONAL: +/- 1/4"
DECIMALS: .XX +/- .02
.XXX +/- .005

TITLE: 3" 150 LB. C.STEEL BASKET STRAINER WITH AIR ELIM. FLANGE
MODEL: 3" 150BFSBW1-AE
WORK ORDER: WO298
DRAWN BY: SI
DRAWING SIZE: B
CHECKED BY: RI
SCALE: 1:7
DATE: 16/08/2013
DRAWING NO.: R-0311
REV.: 1
SHEET: 1 of 3

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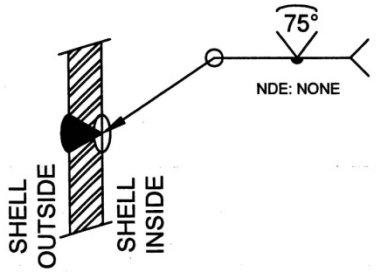
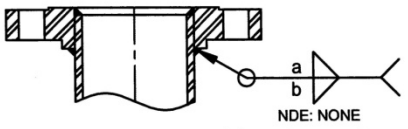
EXAMPLE DRAWING SUBMITTED AND ACCEPTED FOR CRN IN ALBERTA

WPS XX-X



WELD DETAIL CIRC. , LONG SEAMS AND RFWN

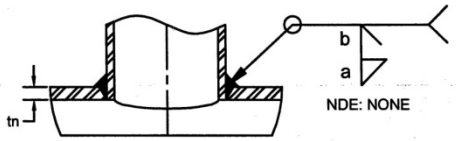
WPS XX-X



MARK	WELD JOINT	SIZE	a	b
N/A	2 TO 1	8"	0.33"	0.37"

R.F.S.O. FLANGES

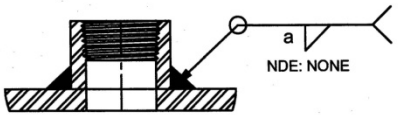
WPS XX-X



MARK	WELD JOINT	SIZE	a	b
N1, N2	5 TO 1	3"	3/16"	tn

PIPE NOZZLES

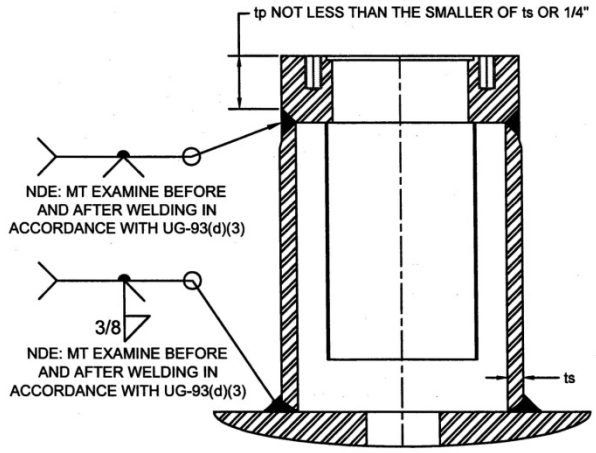
WPS XX-X



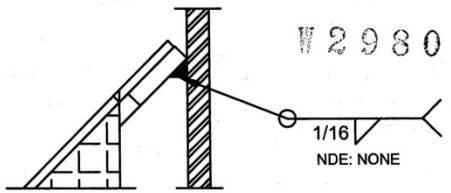
MARK	WELD JOINT	SIZE	a
N3	9 TO 4	1"	1/4"
N5A, N5B	13 TO 5	1/2"	3/16"

COPE AS REQ'D

HALF CPLG NOZZLES



ITEM 3, 14 AND 16 WELD DETAILS



BODY RING TO SHELL

REV.	DESCRIPTION	DATE	INITIALS

UNLESS OTHERWISE NOTED
1. DIMENSIONS ARE IN INCHES. IF USED SI UNITS ARE IN ( ) BRACKETS.
2. TOLERANCES
FRACTIONAL: +/- 1/8"
DECIMALS: .XX +/- .02
.XXX +/- .005

TITLE	3" 150 LB. C.STEEL BASKET STRAINER WITH AIR ELIMINATOR
MODEL	3" 150BFSBW1-AE
WORK ORDER	WO298
DRAWN BY	SI
DRAWING SIZE	B
CHECKED BY	RI
SCALE	NONE
DATE	16/08/2013
DRAWING NO.	R-0311
REV.	0
SHEET	2 of 3

ROUND

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Shell

ASME Section VIII Division 1, 2013 Edition

Component: Cylinder
Material specification: SA-240 316 (II-D p. 78, ln. 5)
Rated MDMT per UHA-51(d)(1)(a), (carbon content does not exceed 0.10%) = -320 °F

Internal design pressure: P = 125 psi @ 210 °F

Static liquid head:

P_s = 2.51 psi (SG = 1, H_s = 69.63",Operating head)
P_{tv} = 2.51 psi (SG = 1, H_s = 69.63", Vertical test head)

Corrosion allowance Inner C = 0" Outer C = 0"

Design MDMT = -20 °F
Rated MDMT = -320 °F

No impact test performed
Material is not normalized
Material is not produced to Fine Grain Practice
PWHT is not performed

Radiography: Longitudinal joint - None UW-11(c) Type 1
Top circumferential joint - None UW-11(c) Type 1
Bottom circumferential joint - None UW-11(c) Type 1

Estimated weight New = 524.6 lb corr = 524.6 lb
Capacity New = 332.31 US gal corr = 332.31 US gal

OD = 42"
Length L_c = 56.75"
t = 0.25"

Design thickness, (at 210 °F) Appendix 1-1

t = $P*R_o$ / (S*E + 0.40*P) + Corrosion
= 127.51*21 / (20,000*0.70 + 0.40*127.51) + 0
= 0.1906"

Maximum allowable working pressure, (at 210 °F) Appendix 1-1

P = $S*E*t / (R_o - 0.40*t) - P_s$
= 20,000*0.70*0.25 / (21 - 0.40*0.25) - 2.51
= 164.95 psi

Maximum allowable pressure, (at 70 °F) Appendix 1-1

P = $S*E*t / (R_o - 0.40*t)$
= 20,000*0.70*0.25 / (21 - 0.40*0.25)
= 167.46 psi

% Forming strain - UHA-44(a)(2)

EFE = $(50*t / R_f)*(1 - R_f / R_o)$
= $(50*0.25 / 20.875)*(1 - 20.875 / \infty)$

EXAMPLE CALCULATIONS (1 page of 96) SUBMITTED AND ACCEPTED FOR A RELATIVELY SIMPLE PRESSURE VESSEL CRN - COMPRESS PRESSURE VESSEL DESIGN SOFTWARE USED

Canadian Registration Number (CRN)

- **How to get a Fitting CRN Number?**

  - The Manufacturer must have a quality system implemented that meets the requirements of CSA B51, ISO 9000 series, CSA/CAN3 Z299 (min. level 3) or an ASME U-Stamp.

  - The following technical information is to be submitted to the jurisdiction where the CRN is being applied for:

  – Standard Fittings
    - Applicable Standard that applies (***which specifies the dimensions, acceptable materials of construction, pressure/temperature ratings and identification marking requirements***)
    - Material Specifications
    - Dimensions / Drawings
    - Pressure-Temperature Ratings

    Applicable Standard Examples:

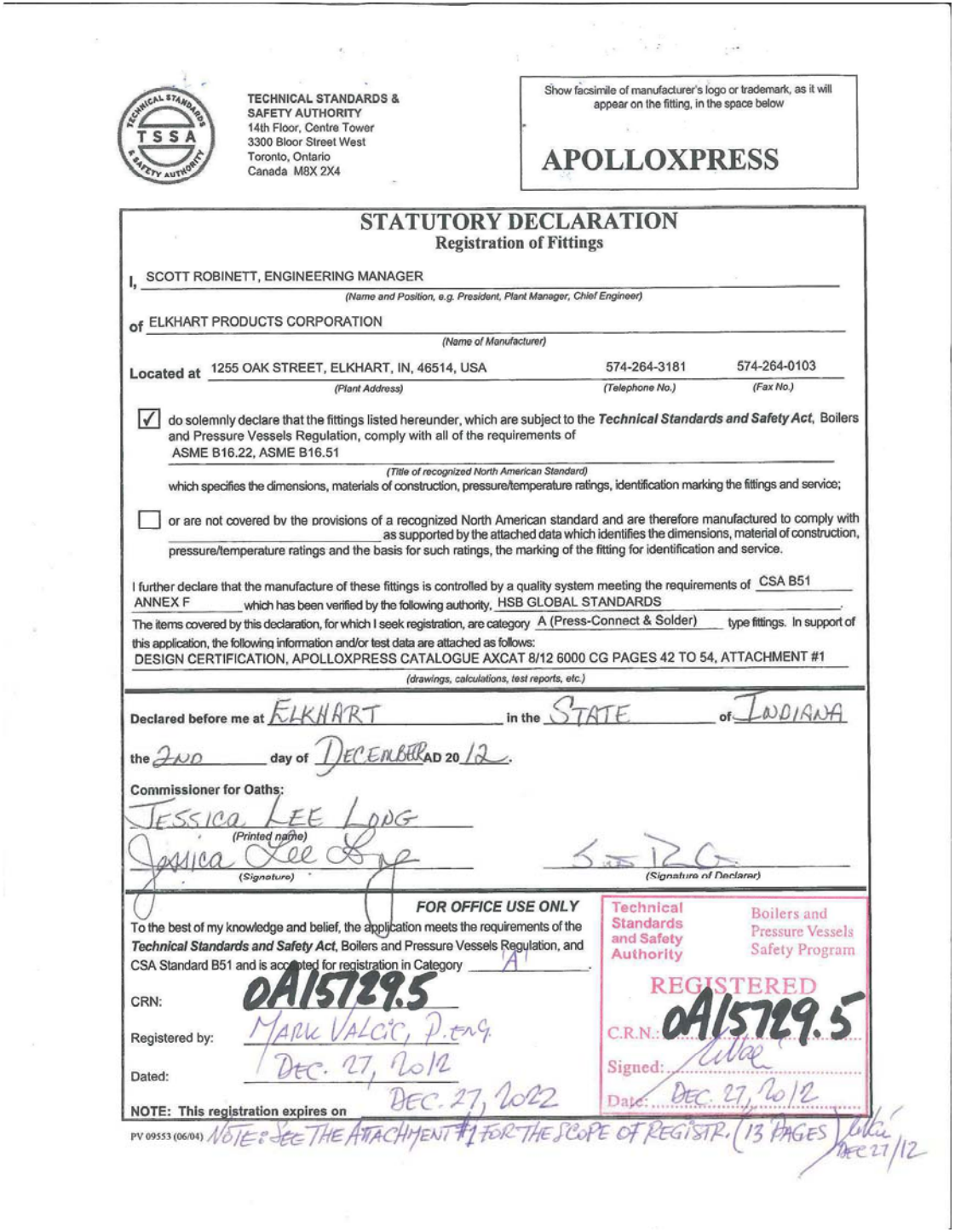
    Flanges: ASME B16.5
    Ball Valves: ASME B16.34
    Butterfly Valves: API 609
    Check Valves: API 594
    Buttweld Tees, Elbows: ASME B16.9

  – Non-Standard Fittings
    - Similar or same as Pressure Vessel Requirements

    Examples: Small Fabricated Filters/Strainers/Vessels/Etc.
    Small Pipe Spools
    Small Custom Fabricated Components

FITTINGS CRN'S MUST BE RENEWED BY THE MANUFACTURER EVERY 10 YEARS.
FITTING CRN'S MUST BE ISSUED IN THE NAME OF THE MANUFACTURER.

Last Revised
April 27, 2014



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

APOLLOXPRESS

STATUTORY DECLARATION
Registration of Fittings

I, SCOTT ROBINETT, ENGINEERING MANAGER
(Name and Position, e.g. President, Plant Manager, Chief Engineer)

of ELKHART PRODUCTS CORPORATION
(Name of Manufacturer)

Located at 1255 OAK STREET, ELKHART, IN, 46514, USA 574-264-3181 574-264-0103
(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 B16.22, ASME B16.51
(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 CSA B51 ANNEX F which has been verified by the following authority, HSB GLOBAL STANDARDS.

The items covered by this declaration, for which I seek registration, are category A (Press-Connect & Solder) type fittings. In support of this application, the following information and/or test data are attached as follows:
DESIGN CERTIFICATION, APOLLOXPRESS CATALOGUE AXCAT 8/12 6000 CG PAGES 42 TO 54, ATTACHMENT #1
(drawings, calculations, test reports, etc.)

Declared before me at ELKHART in the STATE of INDIANA

the 2ND day of DECEMBER AD 20 12.

Commissioner for Oaths:

JESSICA LEE LONG
(Printed name)

Jessica Lee Long
(Signature)

(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 A.

CRN: 0A1529.5

Registered by: MARK VALCIC, P.Eng.

Dated: DEC. 27, 2012

NOTE: This registration expires on DEC. 27, 2022

Technical Standards and Safety Authority — Boilers and Pressure Vessels Safety Program
REGISTERED
C.R.N.: 0A1529.5
Signed:
Date: DEC. 27, 2012

PV 09553 (06/04) NOTE: SEE THE ATTACHMENT #1 FOR THE SCOPE OF REGISTR. (13 PAGES) DEC 27/12

EXAMPLE OF A APPROVED FITTING CRN STATUTORY DECLARATION

(The attached document can be found at www.apollovalves.com/certifications/crn)

For most provinces Fitting CRN applications require two copies of a statutory declaration to be prepared and notarized by the manufacturer for each province and territory the CRN application is being applied for.

Canadian Registration Number (CRN)

- **How to get a Piping CRN Number in Ontario?**

  - The Manufacturer must have a quality system implemented that meets the requirements of CSA B51 or outside of Canada inspection must be performed by a State Boiler Inspector or Insurance Company Inspector, holding a current National Board Commission. **Outside of Canada the manufacturer also needs to hold either a ASME U, S, PP stamp or ISO 9000 series certification or equivalent.**

  - The following technical information is to be submitted to the TSSA:

  – Drawings shall include, but is not limited to, the following
    - Construction Code (i.e. ASME B31.1, B31.3)
    - Design Pressure
    - Design Temperature
    - Type of Pressure and type of test
    - Service Information (e.g. Air, Water, Steam, etc.)
    - Safety/Relief Valve Setting and Location; or
    - Statement regarding overpressure protection
    - EXAMPLES: PI&D (**Are requirements changing???**)

  - Pipe Specifications shall indicate, as a minimum, the following
    - Pipe line identification
    - Pipe size and Schedule
    - Pipe material
    - Fittings classification, identification and rating
    - Statement attesting that only **CRN registered fittings** are to be used.
    - Pipe joining methods and details (welding, brazing, or others)
    - NDE
    - Statement describing maximum support spacing and type, and anchor location

ONTARIO PIPING CRN'S HAVE TO BE REGISTERED FOR EACH INSTALLATION

Last Revised April 27, 2014

Canadian Registration Number (CRN)

- **Piping CRN Number calculations are not required in Ontario???**

  Providing Design Calculations for piping is not a documented requirement to receive a piping CRN in Ontario. Some companies in Ontario do not provide calculations for their piping projects and receive CRN's. (***This may change as other provinces, such as Alberta, begin to implement stricter requirements***)

  THIS DOES NOT MEAN THAT PIPING CALCULATIONS ARE NOT REQUIRED

- **Why???**

  In accordance with the Piping Manufacturer's/Assemblers QC program and CSA B51 requirements Design Calculations are required to be maintained on file.

CERTIFICATE OF COMPLIANCE

I, the undersigned, declare that the described pressure piping system approved under design registration number _____ complies in all respects with the regulations for construction, installation, testing and inspection as required by Ontario´s ***Technical Standards and Safety Act,*** Boilers and Pressure Vessels Regulation, CSA B51 and/or B52 and the applicable Pressure Piping Code of Construction.
Valves, piping and fittings in this installation have been visually inspected to ensure that they comply with Code requirements for identification. All valves and fittings have been duly registered, are of correct schedule and/or ANSI service rating and compatible with the required service condition.

Certificate of Authorization # _____ **Expiry Date** _____

Print Name	**Signature**	**Title**	**Date:** mm-dd-yyyy

Company	Address

Above is the bottom of a Piping Data Report that must be signed by the Manufacturer and Authorised Inspector (AI).

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- **FACTS AND COMMENTS ON CRN'S**

  - Each Canadian Jurisdiction has their own unique set of rules and code interpretations that can affect your CRN application being accepted or not. **It is not a straight forward process**. It is not uncommon to have a design approved in one province and rejected in another.

  - Saskatchewan will accept National Board Registration for pressure vessels instead of a CRN. ** Caution many Saskatchewan end users/Customers still may want a Saskatchewan CRN – Check with them first – Don't Assume.*

  - Saskatchewan does not require CRN registration of category A,B,C or G fittings, however they will issue CRN's if requested. ** Caution many Saskatchewan end users/Customers still may want a Sasketchewan CRN – Check with them first – Don't Assume.*

  - A fitting CRN issued by CSA is recognized by the province of Quebec and Saskatchewan. No need to register separately.

  - British Columbia exempts category A,B,C and G fittings from registration. BC will no-longer issued CRN's for these classes of fittings.

  - ACI Central (www.acicrn) is responsible for CRN registration for the following provinces and territorial jurisdictions:

    PEI, Nova Scotia, New Brunswick, Newfoundland and Labrador, Yukon, Northwest Territories and Nunavut

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- **REGISTRATION REQUIREMENTS IN SUMMARY**

In short, the drawings and calculations must be complete enough that, without having to assume anything, one could use the submitted drawings, calculations and specifications to build the exact same item and have it meet code requirements.

THE CRN SYSTEM IN CANADA CAN BE COMPLICATED, BUT IT'S PURPOSE IS TO ENSURE ONLY SAFE PRODUCTS ARE INSTALLED IN CANADA THAT DO NOT DAMAGE PROPERTY OR CAUSE INJURY TO PERSONNEL.