ABSA
the pressure equipment safety authority

9410 - 20 Ave N.W.
Edmonton, Alberta, Canada T6N 0A4
Tel: (780) 437-9100 / Fax: (780) 437-7787

March 15, 2021

Attention: Scott Islip
ROUND ENGINEERING INC
10 SEGWUN ROAD
WATERDOWN, ON L8B 0K6

The design submission, tracking number 2021-00120, originally received on January 11, 2021 was surveyed and accepted for registration as follows:

CRN : 0H21333.2 **Accepted on:** March 15, 2021

Reg Type: NEW DESIGN **Expiry Date:** March 15, 2031

Drawing No. : SCOPE OF CRN REGISTRATION Rev 03/12/2021

Fitting type: STEAM DISTRIBUTION MANIFOLD AND VALVE ASSEMBLY

Design registered in the name of : WATSON MCDANIEL COMPANY

Description	MAWP	Design Temperature
As per Scope of Registration		

The registration is conditional on your compliance with the following notes:

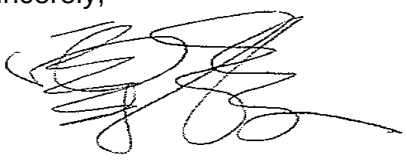
As indicated on AB-41 Statutory Declaration form and submitted documentation, the code of construction are ASME B31.3, B16.34 and ASME B31.1.

- It is our understanding that the fitting(s), included as the scope of this submission, that is(are) subject to the Safety Codes Act shall comply with the requirements of the indicated Standard or Code of Construction on the AB-41 Statutory Declaration as supported by the attached data which identifies the dimensions, materials of construction, press./temp. ratings and the basis for such ratings, and the identification marking of the fittings.
- This registration is valid only for fittings fabricated at the location(s) covered by the QC certificate attached to the accepted AB-41 Statutory Declaration form.
- This registration is valid only until the indicated expiry date and only if the Manufacturer maintains a valid quality management system approved by an acceptable third-party agency until that date.
- Should the approval of the quality management system lapse before the expiry date indicated above, this registration shall become void.

An invoice covering survey and registration fees will be forwarded from our Revenue Accounts.

If you have any question don't hesitate to contact me by phone at (780) 433-0281 ext 3336 or fax (780) 437-7787 or e-mail su@absa.ca.

Sincerely,



SU, YI
DOP Cert. No. D00008398

Alberta Municipal Affairs

ABSA
the pressure equipment safety authority

AB-41 2019-08

STATUTORY DECLARATION
Registration of Fittings
Single or Multiple Fitting Designs within one Fitting Category

In this space, show facsimile of manufacturer's logo or trademark as it will appear on the fitting.

Watson McDaniel

I, ROBERT HICKEY (name of applicant), GENERAL MANAGER (position title) (must be in a position of authority)

of WATSON MCDANIEL (name of manufacturer)

located at 428 JONES BLVD., POTTSTOWN, PENNSYLVANIA, 19464 (plant address)

do solemnly declare that the fittings listed hereunder, which are subject to the Safety Codes Act (select only one)

☒ comply with the requirements of ASME B16.34, B31.1, B31.3 (title of recognized North American Standard) which specifies the dimensions, materials of construction, pressure/temperature ratings and identification marking of the fittings, or

☐ are not covered by the provisions of a recognized North American standard and are therefore manufactured to comply with _____ (title of code of construction or other applicable document) as supported by the attached data which identifies the dimensions, materials of construction, pressure/temperature ratings and the basis for such ratings, and the identification marking of the fittings.

I further declare that the manufacture of these fittings is controlled by a quality control program which has been verified as described in the below Table as being suitable for the manufacturing of these fittings to the stated standard, regulation, code, guideline or other applicable document. The fittings covered by the declaration for which I seek registration are as provided in the Supplementary Sheet(s) attached.

Quality Program Verification and Manufacturing Sites

A copy of the Quality Certificate from each manufacturing site must be included

Item #	Product Description, Model or Series	Quality Program	Scope of Certification	Expiry Date	Verifying Organization	Location(s) Plant Name and address
1.	MSD600 Steam Distribution Manifold and Valve Assembly	ISO 9001:2015	Design, Manufacturing, Supply	Oct. 25, 2022	Hartford Steam Boiler	Pottstown,PA, USA
2.						

Tracking #: _____

In support of this application, the following information, calculations and/or test data are attached:

SCOPE OF CRN, DRAWINGS, CALCULATIONS, REPORTS

(Signature of the Declarer) 12/30/20 (Date)

DECLARED before me at Pottstown (city) in the State of Pennsylvania (province, territory, or state)

this 5th day of January (Month), 2021 (Year)

(print) Jay Goldberg (a Commissioner of Oaths or Notary Public)

(sign) (a Commissioner of Oaths or Notary Public)

Commonwealth of Pennsylvania - Notary Seal
Jay Goldberg, Notary Public
Montgomery County
My commission expires June 28, 2024
Commission number 1299266
Member, Pennsylvania Association of Notaries

04/28/2024 (expiry date (mm/dd/yy))

Commissioner of Oaths / Notary Public in and for: Montgomery County, Pennsylvania (province, territory, or state)

For ABSA Office Use Only:

NOTES:

To the best of my knowledge and belief, the application meets the requirements of the Safety Codes Act and CSA Standard B51, Part 1, Clause 4.2, and is accepted for registration in Category .

CRN:

Registered Date:

Expiry Date:

Signature:
(Signature of the Administrator/SCO)

The information you provide is necessary only for the administration of the programs as required by the Alberta Safety Codes Act and Regulations in the Pressure Equipment Discipline

2021-00120
ABSA
SAFETY CODES ACT - PROVINCE OF ALBERTA
ACCEPTED: 0H21333.2
See acceptance letter for conditions of registration.
Date: 2021-03-15 By: YI SU

This stamp and signature have been affixed electronically to this registered design as required by Section 20(1) of the Pressure Equipment Safety Regulation, in accordance with the Electronic Transactions Act.

Tracking #:

WATSON MCDANIEL
428 JONES BLVD.
POTTSTOWN, PENNSYLVANIA
19464, U.S.A.

March 12, 2021

SCOPE OF CRN REGISTRATION

Product Description	Design Code	Material Specification	Series	Branch Connections	Steam Inlet/ Condensate Outlet	MAWP at 100°F	MAWP at MAWT (psig at °F)	MDMT	Report Number
MSD600 Steam Distribution Manifold and Valve Assembly Main Drawing 2605400 Rev. A	ASME B16.34, ASME B31.3, ASME B31.1	Manifold Valve Body ASTM A105N, Manifold Valve Bonnet ASTM A351-CF8M, Flanges and Forged Fittings ASTM A105, Wrought Fittings ASTM A234-WPB, Pipe: ASTM A106-B **(Note 5)**	MSD600	1/2", 3/4" NPT or Socket Weld	1-1/2" Sch. 80 CL600 ASME B16.5 Flanged or 1-1/2" Sch. 80 Butt Weld or 3/4" NPT or 3/4" Socket Weld **(Note 6)**	1480 psig	1480 psig at 100°F 1360 psig at 200°F 1310 psig at 300°F 1265 psig at 400°F 1205 psig at 500°F 1135 psig at 600°F 1100 psig at 650°F 1060 psig at 700°F 1015 psig at 750°F 825 psig at 800°F	-20°F	R-1358 Rev. 0
					CL300 Flanged **(Note 6)**	740 psig	740 psig at 100°F 680 psig at 200°F 655 psig at 300°F 635 psig at 400°F 605 psig at 500°F 570 psig at 600°F 550 psig at 650°F 530 psig at 700°F 505 psig at 750°F 410 psig at 800°F		
					CL150 Flanged **(Note 6)**	285 psig	285 psig at 100°F 260 psig at 200°F 230 psig at 300°F 200 psig at 400°F 170 psig at 500°F 140 psig at 600°F 125 psig at 650°F 110 psig at 700°F 95 psig at 750°F 80 psig at 800°F		

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Note 1: MAWP = Maximum Allowable Working Pressure, MAWT = Maximum Allowable Working Temperature, MDMT = Minimum Design Metal Temperature.

Note 2: Per CSA Table 1 Note (2)(B) the total volume of any configured manifold assembly shall not exceed 1.5 cubic feet in volume.

Note 3: The pressure-temperature ratings shown are the maximum CRN pressure-temperature ratings. In all cases the MAWP may be limited by the seat or seal material or other considerations. Please consult Watson McDaniel literature.

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Note 4: Per ASME B16.34 para. 2.3.2. the pressure rating for service at any temperature below -20F shall be no greater that the ASME B16.34 ratings for -20F. Products that are to operate at low temperatures shall conform to the rules of the applicable codes under which they are used.

Note 5: Other ASME B16.34 materials may be supplied for the MSD600 Manifold Valve Body under this CRN. When this is the case the pressure-temperature ratings are to be in accordance with the applicable ASME B16.34 Table 2 ratings.

Note 6: When ASME B16.5 CL. 150, CL. 300 and CL. 600 flanges are used the pressure-temperature ratings are to be limited to the applicable ASME B16.34 Table 2 ratings for each pressure class.

Note 7: The drain may be supplied with a 3/4" Condensate Drain pipe nipple with schedule 80 minimum thickness per ASME B36.10. Any valves installed on the drain are not part of this CRN.

Note 8: When used under the ASME B31.1 Code at temperatures greater than 750°F MT or PT or RT per ASME B31.1 Table 136.4.1-1 is required. Please inform Watson McDaniel if this requirement applies to your installation prior to placing an order.

ITEM	DESCRIPTION	MATERIAL
1	STEAM DISTRIBUTION MANIFOLD	CARBON STEEL SA-105N
2	FRAME	CARBON STEEL
3	GATE VALVE, 3/4" NPT	CARBON STEEL

NOTES:
1. MANIFOLD TO BE PAINTED USING WATSON STANTARD PAINT PER MANUFACTURING INSTRUCTIONS
2. WELDS TO BE VISUALLY INSPECTED
3. WELD PROCEDURES AND WELDER TO BE QUALIFIED TO ASME BPVC SEC IX
4. MANIFOLD PMA: 825 PSIG @ 800°F (57 BAR @ 427°C)
5. ITEM 3 OPTIONAL.
6. OUTLET TUBE FITTING CONNECTION AVAILABLE, CONSULT FACTORY

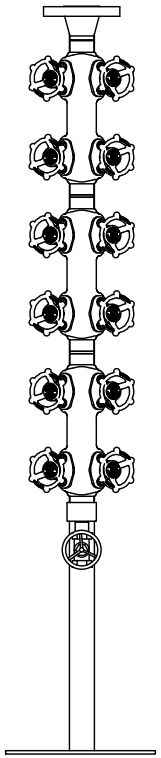
SAMPLE MODEL CODE				
MODEL	A - OUTLET CONNECTION	B - TOP CONNECTION	C - BOTTOM CONNECTION	D-SIPHON TUBE (OPTIONAL)
MSD600	-8-13-SW	-16-F150	-16-BW	-S

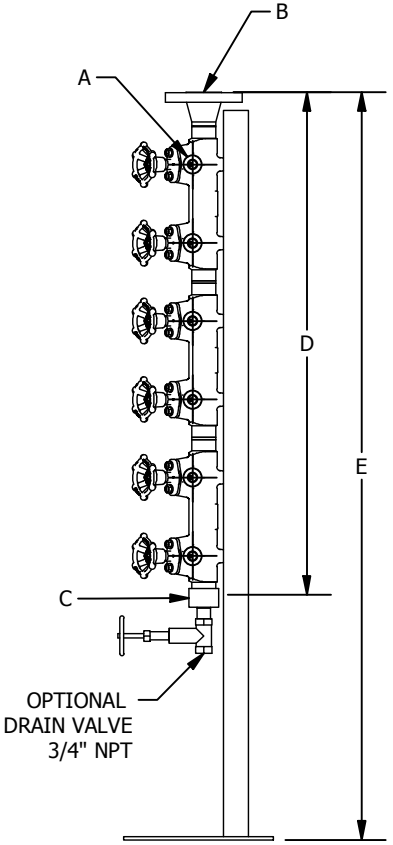
D - SIPHON TUBE (OPTIONAL)		
COUNT	SIZE	TYPE
4	1/2" = 12	NPT = N
8	3/4" = 13	SW
12		NOTE 6

B - TOP CONNECTION	
SIZE	TYPE
1-1/2 = 16	BW 150# RF FLG = F150 300# RF FLG = F300

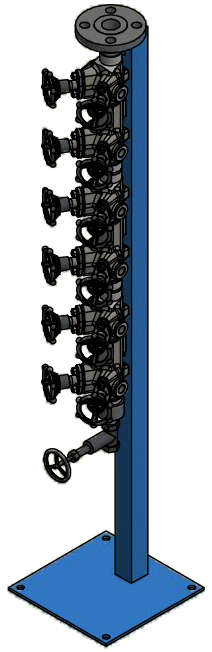
C - BOTTOM CONNECTION	
SIZE	TYPE
1-1/2"	BW

D - SIPHON TUBE (OPTIONAL)		
COUNT	N.P.S.	LENGTH
4	3/4"	14.75"
4	3/4"	27.75"
4	3/4"	40.75"





DIMENSIONS		
CONN. COUNT	D	E
4	22	37 3/16
8	27 3/4	47 7/16
12	40 5/16	59 15/16



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REV	DESCRIPTION	DATE	APPROVED
1	PRELIMINARY	3/20/2018	REC
A	RELEASED	26Oct18	REC

Dimensional Tolerances Unless Otherwise Specified
Machining
Fractions: ±1/64, Angles:±1°
2 place decimals: ±0.010, 3 place decimals: ±0.005
Unmarked surface finishes: 125 RMS or better
Castings
d < 1": ±1/64, 1" < d < 12": ±1/32, d > 12": ±1/16
Angles: ±1°, Concentricity: 0.03 T.I.R.

Fabricate piping per ASME B31.9 unless otherwise specified

Watson McDaniel
428 Jones Boulevard
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MSD600 Steam Distribution Manifold Ass'y

Drawn	Checked	Date	Drawing No.	Rev
KC	REC	3/20/2018	2605400	A

Scale	Part No.	Size
NTS	2605403	A