

345 Carlingview Drive Toronto, Ontario M9W 6N9 Tel.: 416.734.3300 Fax: 416.231.1626 Toll Free: 1.877.682.8772

www.tssa.org

April 16, 2021

PRESSURE VESSEL ENGINEERING LTD. 120 RANDALL DR SUITE B WATERLOO ON N2V 1C6

Workorder Type: Registration - Fitting(Conventional) Workorder No: 8004749 Your Reference No.: PVE-15419 Registered to: BAUM AMERICA CORP.

Dear CATHERINE DIPLOCK,

Technical Standards and Safety Authority (TSSA) is pleased to inform you that your submission has been reviewed and registered as follows:

CRN : 0H23188.5 Main Design No.: 15419scp-1 Revision 0 Expiry Date: Apr 16, 2031

Please be advised that a valid quality control system must be maintained for the fitting registration to remain valid until the expiry date.

See scope of registration

A stamped copy of the approved registration and invoice for engineering services will be mailed to you shortly. Should you have any questions or require further assistance, however, please contact a Customer Service Advisor at 1.877.682.TSSA (8772) or e-mail customerservices@tssa.org. We will be happy to assist you. When contacting TSSA regarding this file, please refer to the Service Request number provided above.

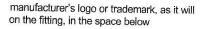
Yours truly,

Alan Wu P. Eng. Mechanical Engineer, BPV Tel.: 416-734-3443 Fax: 416-231-6183 Email: <u>awu@tssa.org</u>

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Technical Standards and Safety Authority 345 Carlingview Drive Toronto, Ontario M9W 6N9 www.tssa.org





STATUTORY DECLARATION **Registration of Fittings** SARY E. MORRHON MANAGINC MA. (Name and Position, e.g. President, Plant Manager, Chief Engineer) of BAUM Lined Piping America. & Baum Lined Piping GmbH. (Name of Manufacturer) Located at 3 PPSI Circle, Charleston, WV, 25312 USA & Additional location per (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 (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 ASME B31.3 2018 Edition ____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 $_$ ___which has been verified by the following authority, <u>Smithers Quality Assessments</u> ISO 9001:2015 The items covered by this declaration, for which I seek registration, are category \underline{H} _____ type fittings. In support of this application, the following information and/or test data are attached as follows: Cat H - Fitting assemblies - See scope for drawing and associated document list (15419scp-1 R0) (drawings, calculations, test reports, etc.) Declared before me at ________ in the <u>State</u> of <u>West Virginia</u> the 29th day of OCTODEr AD 2020 Commissioner for Oaths: OFFICIAL SEAL Notary Public, State of West Virginia NIA KAY CASEY 413 Midland Trail (Printed name) Humicane, WV 25528 My Commission Expires July 17, 2023 (Signature) (Signature of Declarer) FOR OFFICE USE ONLY Technical To the best of my knowledge and belief, the application meets the requirements of the Boilers and Standards Pressure Vessels Technical Standards and Safety Act, Boilers and Pressure Vessels Regulation, and Safety Program and Safety CSA Standard B51 and is accepted for registration in Category _ Authority REGISTERED CRN: C.R.N.: 0H23188.5 Registered by: Signed: Al Date: April 16, 2021. Dated: Apr 16, 2031 NOTE: This registration expires on:

PV 09553 (06/16)

See 'Part of CRN' document. Other manufacturing location includes Gewerbestr. 25-29, 75217 birkenfeld, Germany

URC710/2021



Technical Standards and Safety Authority 345 Carlingview Drive Toronto, Ontario M9W 6N9 www.tssa.org manufacturer's logo or trademark, as it will on the fitting, in the space below

P BAUM

STATUTORY DECLARATION Registration of Fittings		
I, Markus Baum managing director	i iongo	
(Name and Position, e.g. President, Plant Mar	nager, Chief Engineer)	
of Baum Lined Piping GmbH		
(Name of Manufacturer)		, · · ·
Located at Gewerbestr. 25-29, 75217 Birkenfeld, Germany (Plant Address)	(Telephone No.)	(Fax No.)
(Plan Address)	(Telephone No.)	(Fax No.)
do solemnly declare that the fittings listed hereunder, which are subject to the <i>Technical Standards and Safety Act</i> , Boilers and Pressure Vessels Regulation, comply with all of the requirements of		
(Title of recognized North American which specifies the dimensions, materials of construction, pressure/temper		the fittings and service;
or are not covered by the provisions of a recognized North American <u>ASME B31.3 2018 Edition</u> as supported by the attached da pressure/temperature ratings and the basis for such ratings, the marking	ata which identifies the dimension	s, material of construction,
I further declare that the manufacture of these fittings is controlled by a quality	v system meeting the requiremer	nts of
ISO 9001:2015 which has been verified by the following authority, Smithers (
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:		
Cat H - Fitting assemblies - See scope for drawing and associated document list (15419scp-1 R0)	
(drawings, calculations, test repo		
	State 0	f Baden-Württemberg
the <u>16th</u> day of <u>March</u> <u>AD</u> 2021		
NIELS		
Commissioner for Oaths:		
Melanie Löbbecke, notary public		-
(Signature)	(Signature of De	eclarer)
FOR OFFICE USE O		
To the best of my knowledge and belief, the application meets the requirements Technical Standards and Safety Act, Boilers and Pressure Vessels Regulation	of the THIS IS PAR	T OF CRN
CSA Standard B51 and is accepted for registration in Category	Technical Standards a	and Safety Authority
CRN:	Boilers and Pressur Progr	e Vessels Safety
Registered by:		
Dated:		
NOTE: This registration expires on:		
PV 09553 (06/16)		

Scope of Registration – PVE-15419

Baum America Corp. – Fittings Registration – Cat. H

15419scp-1 Revision 0

Design Conditions: Design Code:	ASME 31.3 2018 Edition
Design Pressure:	Per B16.5 100°F to 500°F
	150# 285 PSI @ 100°F to 185 PSI @ 450°F
	300# 485 PSI @ 100°F to 405 PSI @ 450°F
Design Temperature:	100-450°F
Hydrotest:	150# - 427 PSI @ Ambient
	300# - 727 PSI @ Ambient
MDMT:	-20°F @ MAWP
NDE:	None
Impact Testing:	None, 323.2.2
Corrosion Allowance:	0.0 mm
PWHT:	None
Service:	Liquid Chemical and Gas
Internal Volume:	<1.5 ft ³

Drawings:

- 1. Tees 112435 Rev.1 [150#, 300#]
- 2. Crosses 112692 Rev.1 [150#, 300#]
- 3. Pipes 112640 Rev.1 [150#, 300#]
- 4. Stub Ends 112600 Rev.1 [150#, 300#]
- 5. Stub Ends 112601 Rev.1 [150#, 300#]
- 6. Elbow 45° 113023 Rev.1 [150#, 300#]
- 7. Elbow 90° 113026 Rev.1 [150#, 300#]
- 8. Instrument Tees 112769 Rev.1 [150#, 300#]
- 9. Concentric Reducers 113039 Rev.1 [150#, 300#]
- 10. Eccentric Reducers 113041 Rev.1 [150#, 300#]
- 11. 45° Laterals 105999 Rev.1 [150#]

THIS IS PART OF CRN

Technical Standards and Safety Authority Boilers and Pressure Vessels Safety Program

0H23188.5

Calculations:

15419c-1-TSSA R0 – Pipe and Branch calculations

15419c-1ABSA R0 – Pipe and Branch & Burst Test Calculations (only for ABSA)

Materials:

CRN Material List - 12560 Rev.4

Manufacturing Locations:

Baum America Corp. 3 PPSI Circle Charleston, WV 25312 USA ISO9001:2015

Baum Lined Piping GmbH Gewerbestr. 25-29 75217 Birkenfeld Germany ISO9001:2015

CRN Components:

0H1001.0123456789YTN (PVE-12570)

0A1003.0 (both to be combined into 0H1001)