



345 Carlingview Drive
Toronto, Ontario M9W 6N9
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www.tssa.org

January 09, 2017

CHAD THOMAS
ENGINEERED CONTROLS INTERNATIONAL LLC
100 REGO DR
ELON NC 27244
US

Service Request Type: BPV-Fitting Registration

Service Request No.: 2000358

Your Reference No.:

Registered to: ENGINEERED CONTROLS INTERNATIONAL LLC

Dear CHAD THOMAS,

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

CRN No.: 0H19064.5

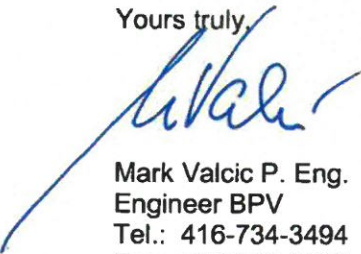
Main Design No.: Dwg. No. MVE4D SER Rev. A, Manifold 1.5" Fill.

Expiry Date: 09-Jan-2027

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

The stamped copy of the approved registration and the invoice are mailed separately. Should you have any questions or require further assistance, 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,


Mark Valcic P. Eng.
Engineer BPV
Tel.: 416-734-3494
Fax: 416-231-1626
Email: mvalcic@tssa.org



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

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. CHAD THOMAS, VP GLOBAL ENGINEERING

(Name and Position, e.g. President, Plant Manager, Chief Engineer)

of ENGINEERED CONTROLS INTERNATIONAL, LLC

Name of Manufacturer)

Located at
100 REGO DRIVE, ELON, NC - 27244

(Plant Address)

336-449-7707

(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 B31.1**

(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 _____ which has been verified by the following authority, **UNDERWRITERS LABORATORY INC**

The items covered by this declaration, for which I seek registration, are category "H" type filings. In support of this application, the following information and/or test data are attached as follows:

SEE ATTACHED LIST

(drawings, calculations, test reports, etc.)

Declared before me at Englewood Controls Int'l/EI04 in the County of Alamance
the 19th day of December AD 20 16.

Commissioner for Oaths:

Marisa E. Elliott

Printed name)

Mauser E. Olympia

(Signature)

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 **approved for registration for Category** **1A**

CRN:

Registered by:

Dated:

NOTE: This registration expires on:

112120 MARIANO, C. E.

NOTE: HAVE TO MANIPULATE TO FILE
SEE THE ATTACHMENT FOR THE SCOPE

MARISA E. ELLIOTT
NOTARY PUBLIC
ALAMANCE COUNTY
NORTH CAROLINA

my commission expires 8/31/2021

(Signature of Declarant)

Boiler and Pressure Vessels Safety Program

**Technical
Standards
and Safety
Authority**

REGISTERED

CR. N.

11

11/07/16

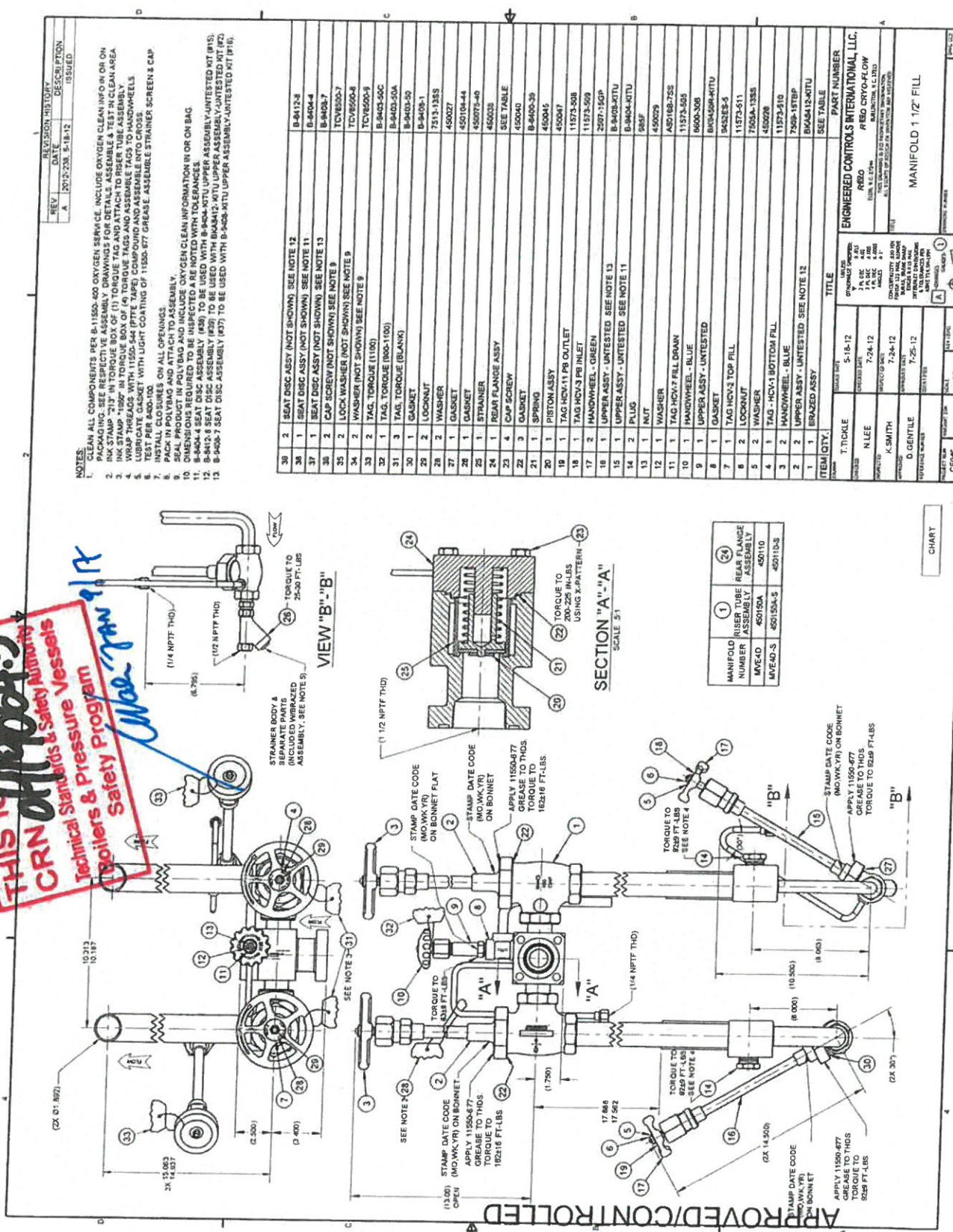
Category	System Number	Description	Drawing Number	Body Number	Body Material	Service Pressure
H	MVE4D	Manifold	450154	450154	Stainless Steel Pipe, ASTM A249, TP304L	600
			450043	450043	FC Brass, UNS C36000, ASTM B16	600
			2227-25	2227-25	FC Brass, UNS C36000, ASTM B16	600
			450153	450153	FC Brass, UNS C36000, ASTM B16	600
			450059	450059	Stainless Steel Pipe, ASTM A249, TP304L	600
			450151	450151	Stainless Steel Pipe, ASTM A249, TP304L	600
			1337C- 22 SER	1337C-22 B, C	Stainless Steel Pipe, ASTM A249, TP304L	600
			1337-53	1337-53	Stainless Steel Pipe, ASTM A249, TP304L	600
			1337B-22 SER	1337B-22B	Stainless Steel Pipe, ASTM A312, TP304L	600
			1337B-62A	1337B-62A	Stainless Steel Pipe, ASTM A249, TP304L	600
			B-8400-12C	B-8400-12SE	Bronze Cast Alloy, UNS C92200, ASTM B61	600
			B-9407-1C	B-9408ST-1	Bronze Cast Alloy, UNS C92200, ASTM B61	600
			B-9403-1C	B-9404ST-2	Bronze Cast Alloy, UNS C92200, ASTM B61	600
			B-8412-11	B-8412-11	Stainless Steel Pipe, ASTM A249, TP304L	600
			BK9450-8	BK9450-8	FC Brass, UNS C36000, ASTM B16	600
			B-9402-10	B-9402-10	Stainless Steel Pipe, ASTM A249, TP304L	600

THIS IS PART OF
CRN 019064.5
Technical Standards & Safety Authority
Boilers & Pressure Vessels
Safety Program

Wade Jan 4/17

THIS IS PART OF
CRN 0199064.5
Technical Standards & Safety Authority
Boilers & Pressure Vessels
Safety Program

Woe Jan 9/17



REV	DATE	DESCRIPTION
A	2012-208, 5-18-12	130462

- NOTES:**
- CLEAN ALL COMPONENTS PER B-11500-000 OXYGEN SERVICE. INCLUDE OXYGEN CLEAN INFO IN OR ON PACKAGING. SEE RESPECTIVE ASSEMBLY DRAWING FOR DETAILS. ASSEMBLE & TEST IN CLEAN AREA.
 - RK STAMP "213" IN TORQUE BOX OF (1) TORQUE TAG AND (2) TORQUE TAGS ON UPPER ASSEMBLY.
 - WASHER (1) 11500-544 (PTFE TAPE) COMPOUND AND ASSEMBLE TAGS TO HANDWHEELS.
 - LUBRICATE GASKET WITH LIGHT COATING OF 11500-677 GREASE. ASSEMBLE STRAINER SCREEN & CAP.
 - TEST PER 1400-100.
 - INSTALL CLOSURES ON ALL OPENINGS.
 - PACK IN POLYBAG AND ATTACH TO ASSEMBLY.
 - STRAINER SCREEN & CAP ARE POLYBAG AND INCLUDE OXYGEN CLEAN INFORMATION IN OR ON BAG.
 - DIMENSIONS REGRIND INSPECTED ARE NOTED WITH TOLERANCES.
 - B-1400-4 SEAT DISC ASSEMBLY (1620) TO BE USED WITH B-1400-10TU UPPER ASSEMBLY-UNTESTED KIT (#15).
 - B-1412-8 SEAT DISC ASSEMBLY (1620) TO BE USED WITH B-1400-10TU UPPER ASSEMBLY-UNTESTED KIT (#2).
 - B-1400-7 SEAT DISC ASSEMBLY (1620) TO BE USED WITH B-1400-10TU UPPER ASSEMBLY-UNTESTED KIT (#16).

ITEM	QTY	DESCRIPTION	REF
1	1	SEAT DISC ASSY (NOT SHOWN) SEE NOTE 12	B-1412-8
2	1	SEAT DISC ASSY (NOT SHOWN) SEE NOTE 11	B-1400-4
3	1	SEAT DISC ASSY (NOT SHOWN) SEE NOTE 13	B-1400-7
4	1	CAP SCREW (NOT SHOWN) SEE NOTE 9	TCV6500-7
5	1	LOCK WASHER (NOT SHOWN) SEE NOTE 9	TCV6500-8
6	1	WASHER (NOT SHOWN) SEE NOTE 9	TCV6500-9
7	1	TAG TORQUE (1100)	B-1400-50C
8	1	TAG TORQUE (100-1100)	B-1400-50A
9	1	TAG TORQUE (BLANK)	B-1400-50
10	1	GASKET	B-1400-1
11	1	LOCKNUT	7513-13S
12	1	WASHER	450027
13	1	GASKET	450104-44
14	1	GASKET	450075-40
15	1	STRAINER	450038
16	1	REAR FLANGE ASSY	SEE TABLE
17	1	CAP SCREW	450040
18	1	GASKET	450045
19	1	SPRING	450041
20	1	PISTON ASSY	11573-500
21	1	TAG HCV-11 PI OUTLET	11573-509
22	1	TAG HCV-3 PI INLET	2507-150P
23	1	HANDWHEEL - GREEN	B-1400-XTTU
24	1	UPPER ASSY - UNTESTED SEE NOTE 13	B-1400-XTTU
25	1	UPPER ASSY - UNTESTED SEE NOTE 11	B-1400-XTTU
26	1	PLUG	950F
27	1	NUT	450029
28	1	WASHER	450160-7SS
29	1	TAG HCV-7 FILL DRAIN	11573-505
30	1	HANDWHEEL - BLUE	6000-308
31	1	UPPER ASSY - UNTESTED	BK14500-XTTU
32	1	GASKET	343282-5
33	1	TAG HCV-2 TOP FILL	11573-511
34	1	LOCKNUT	7503A-13S5
35	1	WASHER	450028
36	1	TAG - HCV-1 BOTTOM FILL	11573-510
37	1	HANDWHEEL - BLUE	7505-15TBP
38	1	UPPER ASSY - UNTESTED SEE NOTE 12	BK14512-XTTU
39	1	BEZEL ASSY	SEE TABLE

ITEM	QTY	DESCRIPTION	REF
1	1	TICKLE	5-18-12
2	1	N LEE	7-24-12
3	1	K SMITH	7-24-12
4	1	D GENTILE	7-25-12
5	1	CF946	251

ENGINEERED CONTROLS INTERNATIONAL, LLC
REDO CRYO-FLOW
 1000 SHAWNEE BLVD. SUITE 100
 WILMINGTON, N.C. 28403
 TEL: 704.261.1111
 FAX: 704.261.1112
 WWW.ECINTL.COM

MANIFOLD 1 1/2" FILL

MVE4D SER C