



To:	TSSA	From:	Janet Townsend
Company:	Engineered Controls International, LLC	Phone:	416-747-4291
Pages:	10	Location:	Toronto
Our File:	ANR-4430	Date:	April 20, 2017

Your File: 2019242

**Subject: Request for Design Registration**

Dear Ms. Francis,

CSA has reviewed the documentation submitted by TSSA on behalf of Engineered Controls International, LLC.

These fittings have been registered by CSA for the Province of Québec. In accordance with an agreement between CSA, the Provinces of Québec and Saskatchewan; this registration is recognized by Quebec and Saskatchewan. These fittings are acceptable for use in these Provinces.

The letters CSA will be applied as a prefix to the CRN indicate which fittings have been registered in this manner. A copy of the stamped Statutory Declaration is attached.

The CRN is CSA-0H19082.56.

A copy of the Statutory Declaration with an original stamp affixed will be forwarded to you along with our invoice by regular mail.

Yours truly

A handwritten signature in blue ink that reads 'Janet Townsend'.

**Janet Townsend**  
Program Manager  
CSA Group



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

**REGO®**

## 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**

(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 B31.1**

(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 **ISO90001**

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 fittings. 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 **Engineered Controls Int'l/Elon** in the **County** of **Alamance, NC**  
the **19th** day of **December** AD 20**16**

Commissioner for Oaths:

**Marisa E. Elliott**

(Printed name)

**Marisa E. Elliott**

(Signature)

**Chad Thomas**

(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 - 0H19082.56**

Registered by:

**R. BARNES**

Dated:

**APRIL 15, 2017**

NOTE: This registration expires on:

**JAN 13, 2027**

PV 09553 (06/16)

**MARISA E. ELLIOTT**  
**NOTARY PUBLIC**  
**ALAMANCE COUNTY**  
**NORTH CAROLINA**

my commission expires **8/31/2021**

**REGISTERED**

**CRN: CSA - 0H19082.56**

Registration Process administered by  
**CSA Group per CSA B51**

**CSA**

Note: See attachment as the scope of registration. - Attachment A Part B.



**CERTIFIED  
TRUE COPY**

Date: **Jan 11/17**

Signature: **Colleen Anne Ratcliff**

**Colleen Anne Ratcliff,**  
a Commissioner, etc., City of Toronto, for the  
Technical Standards & Safety Authority  
Expires July 24, 2019



REGISTERED



CRN: CSA-0419082.56

Registration Process administered by  
CSA Group per CSA B51

Technical Review performed per CSA B51  
Performed by: ANRIC Enterprises Inc.

Signed: *Ken Rame*

Date: April 15, 2017

# ATTACHMENT A

Category	System Number	Description	Drawing Number	Body Number	Body Material	Service Pressure
H	MVE10C	Vent Assembly	B-9407-1C	B-9408PT-3	Bronze Cast Alloy, UNS C92200, ASTM B61	600
			1337A-22 SER	1337A-22B	Stainless Steel Pipe, ASTM A312, TP304L	600


**CSA Group** 1 OF 4

ATTACHMENT TO

C.R.N. CSA-0419082.56

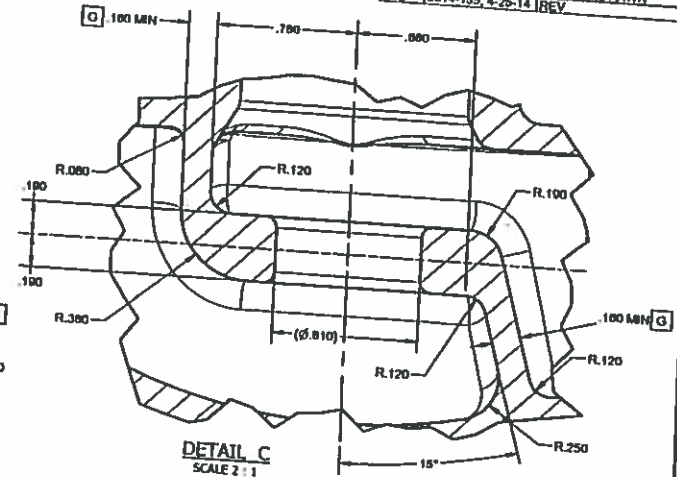
Signed: [Signature]

178 Rexdale Boulevard, Toronto, ON Canada M9W 1R3

THIS IS PART OF  
**CRN 0419082.56**  
 Technical Standards & Safety Authority  
 Boilers & Pressure Vessels  
 Safety Program

Utkar Jan 13/17

APPROVED/CONTROLLED



REVISION HISTORY		
REV A-C	DATE	DESCRIPTION
D	AM68, 2-21-02	REV
E	2012-062, 1-31-12	REV & REDRAWN
F	2013-160, 6-2-13	REV
G	2014-155, 4-28-14	REV & REDRAWN
		REV



1. SAND CASTING TOLERANCES UNLESS OTHERWISE NOTED:  
3PL ± .015, ALL RADII: .063, FLASH TOL: .020 MAX, ANG TOL: ± 1°, CONCENTRICITY: .000 FIM

2. ALL DIMENSIONS ARE PLUS Z DRAFT, UNLESS OTHERWISE NOTED.

3. REMOVE ALL GATES, RISER, FLASH, ETC.

4. REGO TO INSPECT PER 11000-21.

5. MATERIAL CERTIFICATIONS SHALL BE VERIFIED & RETAINED ON FILE AS PERMANENT RECORD.

6. DO NOT OVER GRIND HEX POINTS.

7. DO NOT GRIND HEX FLATS.

8. CASTING SHALL BE LEAK TIGHT WHEN SUBJECTED TO 800 PSIG GAS PRESSURE UNDER WATER AFTER MACHINING.

9. ALL LETTERS, FIGURES, ARROWS, SYMBOLS SHARP & LEGIBLE, & RAISED .020.

10. ALL DIMENSIONS MEASURED TO THEORETICAL SHARP CORNERS.

11. NO MORE THAN .020 RECESS DUE TO CORE FIN ALLOWABLE IN SEAT AREA.

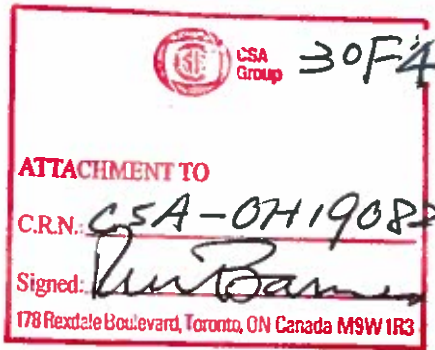
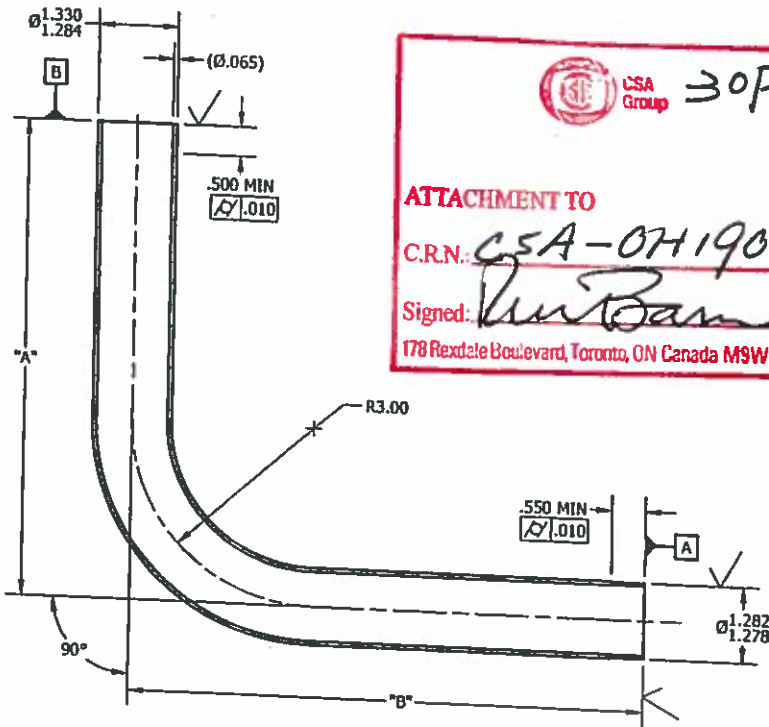
12. VENDOR TO MARK CASTING IN SEAT AREA.

13. CERTIFICATION OF MATERIAL COMPLIANCE TO ASTM B61/B64 DATE CODE & CASTING IMPRESSION NUMBER.  
ACTUAL TEST RESULTS FOR CHEMICAL COMPOSITION AND MECHANICAL PROPERTIES IN ACCORDANCE WITH REQUIREMENTS OF ASTM B61/B64. ANY MATERIAL NOT CONFORMING SHALL BE CAUSE FOR REJECTION OF THE ENTIRE LOT.

MATERIAL: BRONZE CASTING ALLOY PER ASTM B16/B1584 (UNS C92200) MATERIAL SPEC: #1550-681				(EST WT = 2.00 LBS) <b>F</b>	
GRAIN <b>T. TICKLE/LEE</b>		DATED DATE <b>11/14/1987</b>		MOD FOR OTHER SERVICE SPEC WEIGHT: 3.00 LBS 3.00 INCH 4.00 INCH 5.00 INCH 6.00 INCH 8.00 INCH 10.00 INCH 12.00 INCH 14.00 INCH 16.00 INCH 18.00 INCH 20.00 INCH 22.00 INCH 24.00 INCH 26.00 INCH 28.00 INCH 30.00 INCH 32.00 INCH 34.00 INCH 36.00 INCH 38.00 INCH 40.00 INCH 42.00 INCH 44.00 INCH 46.00 INCH 48.00 INCH 50.00 INCH 52.00 INCH 54.00 INCH 56.00 INCH 58.00 INCH 60.00 INCH 62.00 INCH 64.00 INCH 66.00 INCH 68.00 INCH 70.00 INCH 72.00 INCH 74.00 INCH 76.00 INCH 78.00 INCH 80.00 INCH 82.00 INCH 84.00 INCH 86.00 INCH 88.00 INCH 90.00 INCH 92.00 INCH 94.00 INCH 96.00 INCH 98.00 INCH 100.00 INCH 102.00 INCH 104.00 INCH 106.00 INCH 108.00 INCH 110.00 INCH 112.00 INCH 114.00 INCH 116.00 INCH 118.00 INCH 120.00 INCH 122.00 INCH 124.00 INCH 126.00 INCH 128.00 INCH 130.00 INCH 132.00 INCH 134.00 INCH 136.00 INCH 138.00 INCH 140.00 INCH 142.00 INCH 144.00 INCH 146.00 INCH 148.00 INCH 150.00 INCH 152.00 INCH 154.00 INCH 156.00 INCH 158.00 INCH 160.00 INCH 162.00 INCH 164.00 INCH 166.00 INCH 168.00 INCH 170.00 INCH 172.00 INCH 174.00 INCH 176.00 INCH 178.00 INCH 180.00 INCH 182.00 INCH 184.00 INCH 186.00 INCH 188.00 INCH 190.00 INCH 192.00 INCH 194.00 INCH 196.00 INCH 198.00 INCH 200.00 INCH 202.00 INCH 204.00 INCH 206.00 INCH 208.00 INCH 210.00 INCH 212.00 INCH 214.00 INCH 216.00 INCH 218.00 INCH 220.00 INCH 222.00 INCH 224.00 INCH 226.00 INCH 228.00 INCH 230.00 INCH 232.00 INCH 234.00 INCH 236.00 INCH 238.00 INCH 240.00 INCH 242.00 INCH 244.00 INCH 246.00 INCH 248.00 INCH 250.00 INCH 252.00 INCH 254.00 INCH 256.00 INCH 258.00 INCH 260.00 INCH 262.00 INCH 264.00 INCH 266.00 INCH 268.00 INCH 270.00 INCH 272.00 INCH 274.00 INCH 276.00 INCH 278.00 INCH 280.00 INCH 282.00 INCH 284.00 INCH 286.00 INCH 288.00 INCH 290.00 INCH 292.00 INCH 294.00 INCH 296.00 INCH 298.00 INCH 300.00 INCH 302.00 INCH 304.00 INCH 306.00 INCH 308.00 INCH 310.00 INCH 312.00 INCH 314.00 INCH 316.00 INCH 318.00 INCH 320.00 INCH 322.00 INCH 324.00 INCH 326.00 INCH 328.00 INCH 330.00 INCH 332.00 INCH 334.00 INCH 336.00 INCH 338.00 INCH 340.00 INCH 342.00 INCH 344.00 INCH 346.00 INCH 348.00 INCH 350.00 INCH 352.00 INCH 354.00 INCH 356.00 INCH 358.00 INCH 360.00 INCH 362.00 INCH 364.00 INCH 366.00 INCH 368.00 INCH 370.00 INCH 372.00 INCH 374.00 INCH 376.00 INCH 378.00 INCH 380.00 INCH 382.00 INCH 384.00 INCH 386.00 INCH 388.00 INCH 390.00 INCH 392.00 INCH 394.00 INCH 396.00 INCH 398.00 INCH 400.00 INCH 402.00 INCH 404.00 INCH 406.00 INCH 408.00 INCH 410.00 INCH 412.00 INCH 414.00 INCH 416.00 INCH 418.00 INCH 420.00 INCH 422.00 INCH 424.00 INCH 426.00 INCH 428.00 INCH 430.00 INCH 432.00 INCH 434.00 INCH 436.00 INCH 438.00 INCH 440.00 INCH 442.00 INCH 444.00 INCH 446.00 INCH 448.00 INCH 450.00 INCH 452.00 INCH 454.00 INCH 456.00 INCH 458.00 INCH 460.00 INCH 462.00 INCH 464.00 INCH 466.00 INCH 468.00 INCH 470.00 INCH 472.00 INCH 474.00 INCH 476.00 INCH 478.00 INCH 480.00 INCH 482.00 INCH 484.00 INCH 486.00 INCH 488.00 INCH 490.00 INCH 492.00 INCH 494.00 INCH 496.00 INCH 498.00 INCH 500.00 INCH 502.00 INCH 504.00 INCH 506.00 INCH 508.00 INCH 510.00 INCH 512.00 INCH 514.00 INCH 516.00 INCH 518.00 INCH 520.00 INCH 522.00 INCH 524.00 INCH 526.00 INCH 528.00 INCH 530.00 INCH 532.00 INCH 534.00 INCH 536.00 INCH 538.00 INCH 540.00 INCH 542.00 INCH 544.00 INCH 546.00 INCH 548.00 INCH 550.00 INCH 552.00 INCH 554.00 INCH 556.00 INCH 558.00 INCH 560.00 INCH 562.00 INCH 564.00 INCH 566.00 INCH 568.00 INCH 570.00 INCH 572.00 INCH 574.00 INCH 576.00 INCH 578.00 INCH 580.00 INCH 582.00 INCH 584.00 INCH 586.00 INCH 588.00 INCH 590.00 INCH 592.00 INCH 594.00 INCH 596.00 INCH 598.00 INCH 600.00 INCH 602.00 INCH 604.00 INCH 606.00 INCH 60	

# ATTACHMENT A

APPROVED/CONTROLLED



## NOTES:

- PART MUST BE OIL, SCALE AND BURR FREE.
- [A] AND [B] MUST BE PERPENDICULAR TO EACH OTHER AND PERPENDICULAR TO  $\epsilon$ .
- REGO TO INSPECT PER 11600-29. MATERIAL CERTIFICATIONS SHALL BE VERIFIED & RETAINED ON FILE AS PERMANENT RECORD.
- CERTIFICATION OF MATERIAL COMPLIANCE TO ASTM A312 OR A269 SHALL BE FURNISHED WITH EACH LOT OF MATERIAL. INCLUDING ACTUAL TEST RESULTS FOR MECHANICAL PROPERTIES AND CHEMICAL COMPOSITION IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A312 OR A269.

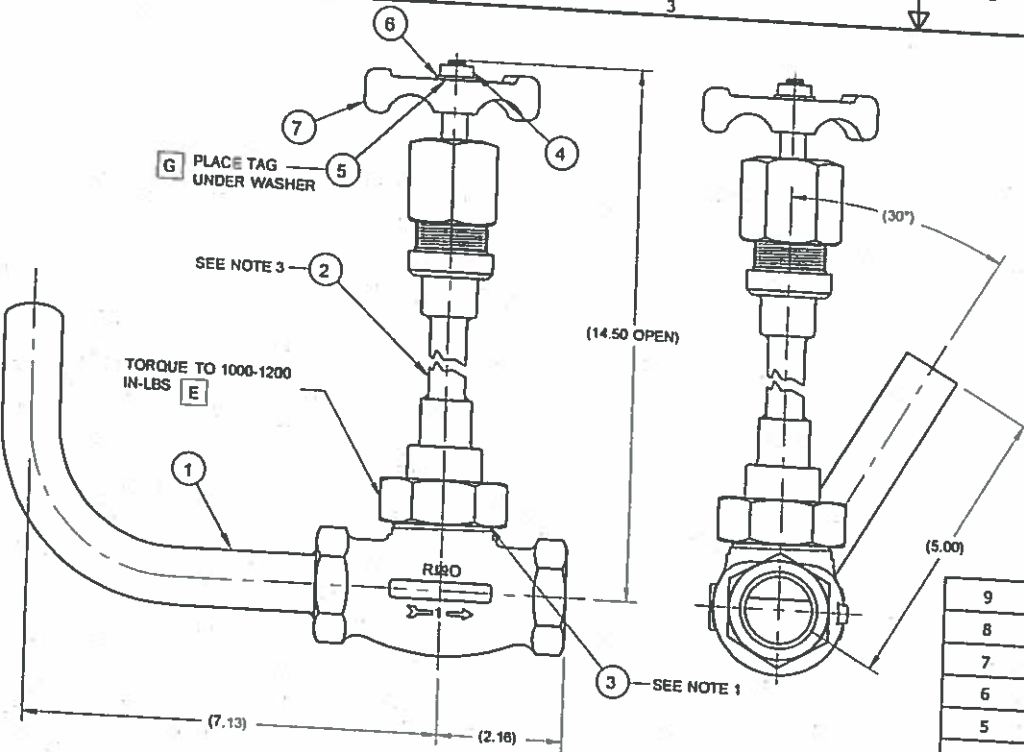
PIPE NUMBER	A DIM	B DIM
1337A-22A	8.235-8.265	15.360-15.390
1337A-22B	4.937-5.063	5.407-5.533
1337A-22C	4.485-4.515	12.740-12.770
1337A-22D	7.937-8.063	8.402-8.528

ALTERNATE MATERIAL: STAINLESS STEEL TUBING PER ASTM A269 GRADE TP304L (UNS S30403)				
MATERIAL SPEC: 11550-304LD				
MATERIAL: 1" NPS SCH 5S STAINLESS STEEL PIPE PER ASTM A312 GRADE TP304L				
MATERIAL SPEC: 11550-304LA				
DRAWN M. MCVEY	ISSUED DATE 11/28/2011	<p>UNLESS OTHERWISE SPECIFIED:</p> <p>2 PL DEC 0.015</p> <p>3 PL DEC 0.02</p> <p>4 PL DEC 0.005</p> <p>ANGLES <math>\pm 1^\circ</math></p> <p>CONCENTRICITY .010 FPM</p> <p>FINISH 125 MAX, REMOVE BURRS, BREAK SHARP EDGES R0.125 MAX</p> <p>INTERPRET DIMENSIONS &amp; TOLERANCES PER ASME Y14.5M-1994</p> <p>CHANGES GAUGES 1</p>		
CHECKED N. LEE	CHECKED DATE 1/30/2012			
UNINSPECTED K. SMITH	UNINSPECTED DATE 2/1/2012			
APPROVED D. GENTILE	APPROVED DATE 2/6/2012			
REFERENCE NUMBER	IDENTIFIER	<p>ENGINEERED CONTROLS INTERNATIONAL, LLC.</p> <p>REGO REGO CRYO-FLOW</p> <p>ELDM, N.C. 27244 BURLINGTON, N.C. 27215</p> <p>THIS DRAWING IS ECI PROPRIETARY INFORMATION. ALL RIGHTS OF DESIGN OR INVENTION ARE RESERVED.</p> <p>TITLE</p> <p>PIPE, BENT</p> <p>1" NPS SCH 5S, SSTL</p>		
PROJECT NUM	VARIANT DIM	SCALE 1:2	REV LEVEL A	<p>DRAWING NUMBER</p> <p>1337A-22 SER</p> <p>DWG SIZE B</p>



# ATTACHMENT A

REVISION HISTORY		
REV	DATE	DESCRIPTION
A-E		REV
F	AG340, 8-6-09	REV
G	2011-305, 7-21-11	REV



## NOTES:

1. CLEAN GASKET PER B-11550-400 FOR OXYGEN SERVICE JUST PRIOR TO ASSEMBLY.
2. TEST PER 8400-100.
3. STAMP DATE CODE (MO, WK, YR) .13 STD. FIGURES ON BONNET & BODY.
4. ATTACH TORQUE TAG TO HANDWHEEL/STEM.
5. INSTALL CLOSURES ON ALL OPENINGS.
6. SEAL PRODUCT IN POLYBAG AND INCLUDE OXYGEN CLEAN INFORMATION IN OR ON BAG IN A TAMPER EVIDENT MANNER.

CSA Group  
**ATTACHMENT TO**  
**C.R.N. CSA-041908216**  
 Signed: \_\_\_\_\_  
 178 Rexdale Boulevard, Toronto, ON Canada M9W1R3

40F4 Note CRN does not include upper assembly.  
 RMB

ITEM	QTY	DESCRIPTION	PART NUMBER
9	1	TAG, TORQUE (1100) (NOT SHOWN) SEE NOTE 4	B-9403-50C
8	1	SEAT DISC ASSY (NOT SHOWN)	B-9408-7
7	1	HANDWHEEL-GREEN	2507-15GP
6	1	WASHER	450028
5	1	TAG, HCV-13 PRODUCT SUPPLY	11573-506
4	1	LOCKNUT	7505A-13SS
3	1	GASKET	B-9408-1
2	1	UPPER ASSY-UNTESTED	B-9408-KITU
1	1	BRAZED ASSY	MVE10C-2

DRAWN T. TICKLE		ISSUED DATE 12-6-00		TITLE VENT ASSY	
CHECKED N. LEE	CHECKED DATE 8-11-11	UNLESS OTHERWISE SPECIFIED: 2 PL DEC 0.015 3 PL DEC 0.02 4 PL DEC 0.005 ANGLES 0.1°		ENGINEERED CONTROLS INTERNATIONAL, LLC. RESO BURLINGTON, N.C. 27315	
INSPECTED J. HOWARD	INSPECTED DATE 8-30-11	CONCENTRICITY .010 TYP FINISH 125 MAX, REMOVE BURRS, BREAK SHARP EDGES, FILE ALL INTERFERENCE POINTS DIMENSIONS PER ASME Y14.5M-1994		THIS DRAWING IS THE PROPERTY OF ENGINEERED CONTROLS INTERNATIONAL, LLC. ALL RIGHTS OF DESIGN OR INVENTION ARE RESERVED.	
APPROVED D. GENTILE	APPROVED DATE 8-30-11	CHANGES 1		DRAWING NUMBER MVE10C	
PROJECT NAME VARIANT ORN	SCALE .5:1	REV LEVEL G	DWG SIZE B		

APPROVED/CONTROLLED



# CERTIFICATE



This is to certify that

## **Engineered Controls International, LLC**

100 Rego Drive  
Elon, NC 27244  
United States of America

with the organizational units/sites as listed in the annex

has implemented and maintains a **Quality Management System**.

### Scope:

The design and manufacture of valves, regulators and fittings for the L.P. Gas, Anhydrous Ammonia, LNG, and Compressed Gas Industries.

Through an audit, documented in a report, it was verified that the management system fulfills the requirements of the following standard:

## **ISO 9001 : 2008**

Certificate registration no.	10001523 QM08
Date of original certification	1994-10-04
Date of certification	2015-12-22
Valid until	2018-09-14



**DQS Inc.**

Ganesh Rao  
Managing Director







**Annex to Certificate**  
**Registration No. 10001523 QM08**

**Engineered Controls International, LLC**

100 Rego Drive  
Elon, NC 27244  
United States of America

**Location**

**10003889**  
**Engineered Controls International, LLC**  
**3181 Lear Drive**  
**Burlington, NC 27215**  
**United States of America**

**10003890**  
**Engineered Controls International, LLC**  
**911 Industrial Drive S.W.**  
**Conover, NC 28613**  
**United States of America**



March 2017

## **CRN – Canadian Registration Numbers - Saskatchewan**

The Province of Saskatchewan participates with Quebec and the Canadian Standards Association (CSA Group) for the registrations of “Fittings”.

Per an agreement with CSA Group in April 1998, Saskatchewan recognizes registrations done by CSA Group and accepts such fittings for use in Saskatchewan.

The letters “CSA” are applied as a prefix to the CRN to indicate which “Fittings” have been registered in this manner. You should inform your clients of this additional marking requirement and that “Fittings” registered by CSA Group are accepted for use in Saskatchewan Canada.