

FORM U-3 MANUFACTURER'S CERTIFICATE OF COMPLIANCE
COVERING PRESSURE VESSELS TO BE STAMPED WITH THE UM SYMBOL [SEE U-1 (j)]
As Required by the Provisions of the ASME Boiler and Pressure Vessel Code Rules, Section VIII, Division 1.

1. Manufactured and certified by Eficiencia ThermoE, S.A. de C.V. Lago Poo No.18, Col. Torreblanca Delegación Miguel Hidalgo Mexico, Distrito Federal 11280 Mexico
 (Name and address of Manufacturer)

2. Manufactured for Advanced Industrial Components Inc. 2899 Portland Drive Oakville, Ontario, L6H 5S4 Canada
 (Name and address of Purchaser)

3. Location of installation Unknown
 (Name and address)

4. Type Horizontal Heat exchanger BEM-06-678 0.320 ft³ 2012UM0046
 (Horizontal, vertical or sphere) (Tank, separator, etc.) (Capacity) (Manufacturer's serial number)
V9370.2 A7125.3 A-BEM-06-678-00.00 2012
 (CRN) (Drawing number) (National Board Number) (Year built)

5. ASME Code, Section VIII, Div.1 Edition 2010, Addenda 2011a None
 (Edition and Addenda, if applicable (date)) (Code Case number)

6. Shell: (a) Number of course (s) 1 (b) Overall length 23.875 in

Course (s)			Material		Thickness		Long. Joint (Cat. A)			Circum. Joint (Cat. A, B, and C)			Heat Treatment	
No.	Diameter	Length	Spec./Grade or Type		Nom.	Corr.	Type	Full, Spot, None	Eff.	Type	Full, Spot, None	Eff.	Temp.	Time
1	6.625 in O.D.	23.875 in	SA-312 TP316L		SCH 10	0	WLD	None	0.85	1/7	---	0.7/NA	---	---

7. Heads: (a) SA 403 WP316L H.T. None (b) SA 403 WP3016L H.T. None
 (Material spec. number, grade or type) (H.T.—Time and temp.) (Material spec. number, grade or type) (H.T.—Time and temp.)

	Location (Top, Bottom, Ends)	Thickness		Radius		Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure		Category A		
		Min.	Corr.	Crown	Knuckle					Convex	Concave	Type	Full, Spot, None	Eff.
(a)	End	0.108"	0"	---	---	1.688"	---	---	---	No	Yes	S	None	1
(b)	Top	0.108"	0"	---	---	1.688"	---	---	---	No	Yes	S	None	1

If removable, bolts used (describe other fastening) _____
 (Material spec. number, grade, size, number)

8. Type of jacket _____ Jacket closure _____
 (Describe as ogee & weld, bar, etc.)

If bar, give dimensions; if bolted, describe or sketch _____

9. MAWP 150 PSI at max. temp. 300 °F Min. design metal temp. 0 °F at 150 PSI
 (Internal) (External) (Internal) (External)

10. Impact test No, exempt per UHA-51-(d)(1) at test temperature of _____
 (Indicate yes or no and the component(s) impact tested)

11. Hydro., pneu., or comb. test pressure Hydro at 195 PSI Proof test _____

12. Nozzles, inspection, and safety valve openings:

Purpose (Inlet, Outlet, Drain, etc.)	No.	Diameter or Size	Type	Material		Nozzle Thickness		Reinforcement Material	Attachment Details		Location (Insp. Open.)
				Nozzle	Flange	Nom.	Corr.		Nozzle	Flange	
Outlet	1	NPS 2	NPT	SA-182F316L	---	3M	0"	---	Welded	---	Shell
Drain	1	NPS 3/4	NPT	SA-182F316L	---	3M	0"	---	Welded	---	Shell
Vent	1	NPS 3/4	NPT	SA-182F316L	---	3M	0"	---	Welded	---	Shell
Inlet	1	NPS 2	NPT	SA-182F316L	---	3M	0"	---	Welded	---	Shell
Inlet/Outlet	2	NPS 3	CL 300 WNR	SA 403 316L	SA 182F316L	SCH 10	0"	---	Welded	Welded	Head

13. Supports: Skirt No Lugs No Legs No Others No Attached No
 (Yes or No) (No.) (No.) (Describe) (Where and how)

14. Manufacturer's Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report
 (list the name of part, item number, Manufacturer's name and identifying number):
None

15. Remarks Relief device per UG-125 by others. Manufacturer Serial No. die marked on tubesheet, shell and main flange.
Main flanges, SA-240-316L thick 1.5, bolted/nutted SA-193 B7, 1/2"Ø, UNC, 24 pcs/SA-194 2H, 48 pcs. NA= Not applicable.
Tube side: MAWP 433 PSI int 150 ext at max temp. 300 °F. Min. design metal temp. 0 °F at 433 PSI. Hydro at 563 PSI.

CERTIFICATE OF SHOP COMPLIANCE

We certify that the statements made in this report are correct and that all details of design, material, construction, and workmanship of this vessel conform to the ASME BOILER AND PRESSURE VESSEL CODE, Section VIII, Div 1.

UM Certificate of Authorization Number 42,057 Expires December 27, 2012

Date Sep 28, 2012 Name Eficiencia ThermoE, S.A. de C.V. Signed Elizabeth Santillan
 (Manufacturer) (Representative)

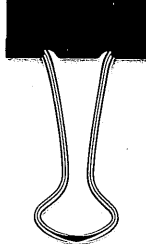
Signed Ian Pardubicki
 (Certified Individual)



**Technical
Safety Authority
of Saskatchewan**

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REGISTRATION APPROVAL

16-Aug-12

Advanced Industrial Components Inc.
2899 Portland Drive
Oakville, ON
L6H 5S4

Our File 46202 [0V]

ATTENTION : Otilia Fuentes

With reference to your submission respecting the registration of the item below, for legal use in the province, please note we have surveyed, approved and registered this design as noted.

MANUFACTURER :	Eficiencia ThermoE, S.A. de C.V.	
ITEM :	DRAWING NUMBER :	CRN:
BEM-06-678-76 Heat Exchanger	A-BEM-06-678-00.00 Rev 5, TBS- 06-678-02.01 Rev 1	A7125.3

We wish to point out that every vessel must be constructed strictly in accordance with the registered design.

In addition to stamping every vessel with the registration number given above and as required in CSA Code B51, a Manufacturer's Data Report must be forwarded to this office immediately at the time a vessel is shipped. Such forms may be obtained upon request.

Sincerely,

Adenike Adeoti, P.Eng.

Codes and Standards Compliance

REMARKS: WA-SH-BEM-06-678-06.01, TB-06-678-08.01 Rev 1, WA-CH-BEM-06-678-07.01, FL-06-678-03.01, BA-06-678-04.01, SH-BEM-06-678-01.01 & GA-06-678-05.01 Rev 0



the pressure equipment safety authority

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

September 28, 2012

Attention: Otilia Fuentes

AIC - ADVANCED INDUSTRIAL COMPONENTS
2899 PORTLAND DRIVE
OAKVILLE, ON

The design submission, tracking number 2012-05225, originally received on July 25, 2012 was surveyed and accepted for registration as follows:

CRN : V9370.2

Accepted on: September 28, 2012

Reg Type: New Design

Drawing No. : A-BEM-06-678-00.00 Rev 5

Description	MAWP	Design Temperature	MDMT
SS Internal Pressure	1034 kPa	149 ^o C	-18 ^o C
TS Internal Pressure	2985 kPa	149 ^o C	-18 ^o C

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 3330 or fax (780) 437-7787 or e-mail grynchuk@absa.ca.

Sincerely,

GRYNCHUK, MILLA