

FORM U-1A MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS
(ALTERNATIVE FORM FOR SINGLE CHAMBER, COMPLETELY SHOP OR FIELD FABRICATED VESSELS ONLY)
AS REQUIRED BY THE PROVISIONS OF THE ASME CODE RULES, SECTION VIII, DIVISION 1

1. Manufactured and certified by: AXH air-coolers, LLC - 401 EAST LOWRY ROAD - CLAREMORE, OKLAHOMA 74017
(Name and address of manufacturer)

2. Manufactured for: ENERFLEX (HOUSTON), 10815 TELGE ROAD, HOUSTON, TEXAS 77095

3. Location of installation: UNKNOWN
(Name and address)

4. Type HORZ. H. EXCHANGER 115041B.1 NONE 115041 IC1 R1 21664 2012
(Horizontal, or vertical, tank) (Manufacturer's serial no.) (CRN) (Drawing number) (National Board number) (Year built)

5. The chemical and physical properties of all parts meet the requirements of material specifications of the ASME BOILER AND PRESSURE VESSEL
 CODE. The design, construction and workmanship conform to ASME Rules, Section VIII, Division 1. 2010 EDITION
Year

to: 2011a ADDENDA
Addenda, if applicable (date) (Code Case numbers) (Special Service per UG-120 (d))

6. Shell: TUBE/PLUG: SA-516-70 FR & BK 1 1/8" .125 FR & BK 0' 6 5/8" 9' 7/8"
(Material spec. number, grade) (Nominal thickness) (Corr. allow) (Inner diameter) (Length (overall))

7. Seams: CORNER JOINT NONE 1.0 1150° 1 - - *2
[Long. (welded, dbl., singl., Lap, Butt)] R.T. (Spot or Full) (Eff., %) (H.T. temp.) (Time, hr) [Girth (welded, dbl., singl., lap, butt)] [R.T. (spot or full)] (Eff., %) (No. of courses)

8. Heads: (a) Material WRAPPERS: SA-516-70 (b) Material ENDS: SA-516-70
(Spec. no., grade) (Spec. no., grade)

	Location (Top, Bottom, Ends)	Minimum Thickness	Corrosion Allowance	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
a	WRAPPERS	5/8"	.125	-	-	-	-	-	**	FLAT
b	ENDS	1/2"	.125	-	-	-	-	-	***	FLAT

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

9. MAWP 325 psi. N/A at max. temp 350 °F N/A
(Internal) (External) (Internal) (External)

Min. design metal temp. -20 °F at 325 psi. Hydro., pneu.-or-comb. test pressure 423 psi.

Proof Test NONE

10. Nozzles, inspection, and safety valve openings:

Purpose (Inlet, Outlet, Drain)	No.	Diameter or size	Type	Material		Nozzle Thickness		Reinforcement Material	Attachment Details		Location (Insp. Open.)
				Nozzle	Flange	Nom.	Corr.		Nozzle	Flange	
INLET/OUTLET	2	6"-300#	PIPE/RFWN	SA-106-B	SA-105	S/XXH	0.125	NONE	UW-16(a)	UW-16(a)	HEADER
INSTRUMENT	3	1"	CPLG	SA-105	-	6000#	0.125	NONE	UW-16(a)	-	HEADER
PLUGS	572	3/4"-16	UNF	SA-105	-	-	-	-	-	-	HEADER

11. Supports: Skirt NO Lugs N/A Legs N/A Other STRUCTURE Attached BOLTED
(Yes or no) (Number) (Number) (Describe) (Where and How)

12. Remarks: Manufacturer's Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report: _____
(Name of part, item number, Manufacturer's name and identifying stamp)

*2 HEADERS, ONE AT EACH END. **WRAPPERS FLAT DIA. 5 3/4" X 9' 7/8". ***ENDS FLAT DIA. 5 3/4" X 5 3/8".
 286 TUBES SA-214 5/8" O.D. X .060 MW 34' 0" LG.
 IMPACTS EXEMPT PER UG-20(f). PRESSURE RELIEF DEVICE BY OTHERS. CONSTRUCTED IN ACCORDANCE WITH APPENDIX 28.

CERTIFICATE OF SHOP / FIELD 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, Division 1. "U" Certificate of Authorization Number <u>34,950</u> expires <u>02/07/2014</u>	
Date <u>6.1.2012</u> Co. name <u>AXH air-coolers, LLC.</u> Signed <u>Renee Weeks</u> (Manufacturer) (Representative)	
CERTIFICATE OF SHOP / FIELD INSPECTION	
Vessel constructed by <u>AXH air-coolers, LLC.</u> at <u>401 E. LOWRY ROAD - CLAREMORE, OKLAHOMA 74017</u>	
I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of <u>OKLAHOMA</u> and employed by <u>TUV RHEINLAND AIA SERVICES, LLC OF TEXAS</u>	
have inspected the component described in this Manufacturer's Data Report on <u>5-30-12</u> and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel in accordance with ASME BOILER AND PRESSURE VESSEL CODE, Section VIII, Division 1. By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his/her employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.	
Date <u>6-4-12</u> Signed <u>[Signature]</u> Commissions <u>NB12461A OK883</u> (Authorized Inspector) (National Board (incl. endorsements,) State, Province, and number)	

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(Name and address of manufacturer)

2. Manufactured for: ENERFLEX (HOUSTON), 10815 TELGE ROAD, HOUSTON, TEXAS 77095

3. Location of installation: UNKNOWN
(Name and address)

4. Type HORZ. H. EXCHANGER 115041B.2 NONE 115041 IC2 R0 21665 2012
(Horizontal, or vertical, tank) (Manufacturer's serial no.) (CRN) (Drawing number) (National Board number) (Year built)

5. The chemical and physical properties of all parts meet the requirements of material specifications of the ASME BOILER AND PRESSURE VESSEL
CODE. The design, construction and workmanship conform to ASME Rules, Section VIII, Division 1. 2010 EDITION
Year

to: 2011a ADDENDA
Addenda, if applicable (date) (Code Case numbers) (Special Service per UG-120 (d))

6. Shell: TUBE/PLUG: SA-516-70 FR & BK 1 3/8" .125 FR & BK 0' 8 7/8" 2' 1 3/8"
(Material spec. number, grade) (Nominal thickness) (Corr. allow) (Inner diameter) (Length (overall))

7. Seams: CORNER JOINT NONE 1.0 1150° 1 - - - - *2
(Long, (welded, dbl., R.T. (Spot or Full) (Eff., %) (H.T. temp.) (Time, hr) (Girth (welded, dbl., singl., lap, butt)) (R.T. (spot or full) (Eff., %) (No. of courses singl., Lap, Butt))

8. Heads: (a) Material WRAPPERS: SA-516-70 (b) Material ENDS: SA-516-70
(Spec. no., grade) (Spec. no., grade)

	Location (Top, Bottom, Ends)	Minimum Thickness	Corrosion Allowance	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
a	WRAPPERS	5/8"	.125	-	-	-	-	-	**	FLAT
b	ENDS	5/8"	.125	-	-	-	-	-	***	FLAT

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

9. MAWP 600 psi. N/A at max. temp 350 °F N/A
(Internal) (External) (Internal) (External)

Min. design metal temp. -20 °F at 600 psi. Hydro., pneu.-or-comb. test pressure 780 psi.

Proof Test NONE

10. Nozzles, inspection, and safety valve openings:

Purpose (Inlet, Outlet, Drain)	No.	Diameter or size	Type	Material		Nozzle Thickness		Reinforcement Material	Attachment Details		Location (Insp. Open.)
				Nozzle	Flange	Nom.	Corr.		Nozzle	Flange	
INLET/OUTLET	2	4"-300#	PIPE/RFWN	SA-106-B	SA-105	S/160	0.125	NONE	UW-16(a)	UW-16(a)	HEADER
INSTRUMENT	3	1"	CPLG	SA-105	-	6000#	0.125	NONE	UW-16(a)	-	HEADER
PLUGS	84	1 1/8"-12	UNF	SA-105	-	-	-	-	-	-	HEADER

11. Supports: Skirt NO Lugs N/A Legs N/A Other STRUCTURE Attached BOLTED
(Yes or no) (Number) (Number) (Describe) (Where and How)

12. Remarks: Manufacturer's Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report: (Name of part, item number, Manufacturer's name and identifying stamp)

*2 HEADERS, ONE AT EACH END. **WRAPPERS FLAT DIA. 3 1/4" X 2' 1 3/8". ***ENDS FLAT DIA. 3 1/4" X 7 5/8".
42 TUBES SA-214 1" O.D. X .060 MW 34' 0" LG.
IMPACTS EXEMPT PER UG-20(f). PRESSURE RELIEF DEVICE BY OTHERS. CONSTRUCTED IN ACCORDANCE WITH APPENDIX 28.

CERTIFICATE OF SHOP / FIELD 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, Division 1. "U" Certificate of Authorization Number <u>34,950</u> expires <u>02/07/2014</u>	
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Date <u>6-4-12</u> Signed <u>[Signature]</u> Commissions <u>NB12461A OK883</u> (Authorized Inspector) (National Board (incl. endorsements,) State, Province, and number)	