

FORM U-1A MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS

Additional Drawing No. \_\_\_\_\_ (Alternative Form for Single Chamber, Completely Shop or Field Fabricated Vessels Only)

Header Volume (cu.ft.) \_\_\_\_\_ As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

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1. Manufactured and certified by Air-X-Changers, A Harsco Company, 5215 Arkansas Road, Catoosa, Oklahoma, 74015, USA  
(Name and address of manufacturer)

2. Manufactured for SEC, P.O. BOX 1665, WALLER, Texas, 77484, USA  
(Name and address of purchaser)

3. Location of Installation UNKNOWN  
(Name and address)

4. Type Heat Exchanger 052204.3 N/A HDR-3, REV0 50913 2005  
(Horiz. or Vert. tank) (Mfr's serial No.) (CRN) (Drawing No.) (Nat'l. Bd. No.) (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 2004 to ---  
(year) (Addenda (Date))

N/A N/A  
Code Case Nos. Special Service per UG-120(d)

6. Shell: SA516 70N 1" N/A 0' 8.2500" (OD) 2' 11.25"  
Mat'l. (Spec. No., Grade) Nom. Thk. (in.) Corr. Allow. (in.) Diam. I.D. (ft. & in.) Length (overall) (ft. & in.)

7. Seams: Corner Joint N/A C=.20 N/A N/A N/A N/A N/A N/A N/A  
Long. (Welded, Dbl., Sngl., Lap, Butt) R.T. (Spot or Full) Eff. (%) H.T. Temp (°F) Time (hr) Girth. (Welded, Dbl., Sngl., Lap, Butt) R.T. (Spot or Full) Eff. (%) No. of Courses

8. Heads: (a) Mat'l: SA516 70N (b) Mat'l: SA516 70N  
(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)	TOP, BTM	.875"	N/A	N/A	N/A	N/A	N/A	N/A	8"x35.25"	N/A
(b)	ENDS	.75"	N/A	N/A	N/A	N/A	N/A	N/A	8"x6.5"	N/A

If removable, bolts used (describe other fastenings) N/A  
(Mat'l., Spec. No., Gr., Size, No.)

9. MAWP 645 N/A psi at max. temp. 350 N/A °F  
(internal) (external) (internal) (external)

Min. design metal temp. -10 °F at 645 psi Hydro, pneu., or comb. test pressure Hydro. at 839 psi.

10. Nozzles, inspection and safety valve openings:

Purpose (Inlet, Outlet, Drain)	No.	Diam. or Size	Type	Mat'l.	Nom. Thk.	Reinforcement Mat'l.	How Attached	Location
IN/OUT	2	8"	300# RFWN	SA105/SA106 GR.B	SCH 80	Weld	Welded	Header

11. Supports: Skirt NO Lugs N/A Legs N/A Other \_\_\_\_\_ Structure \_\_\_\_\_ Attached \_\_\_\_\_ Bolted \_\_\_\_\_  
(Yes or no) (No.) (No.) (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:  
Box Headers, S/N 052204.3, Professional Fabricators, Inc.  
(Name of part, item number, Mfg's name and identifying stamp)

(A) TUBES: 88 x .625" OD, Straight: YES, Length: 288", Gauge: 16BWG, Material: SA214 Rolled  
Tube Sheet (B) INSP.OPENINGS: 176, Type: 3/4x16UNF-Threaded, Material: SA105 (C) IMPACT  
REQUIREMENTS: Vessel exempt from Impact Testing per UG-20(f).

#### 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 Code for Pressure Vessels, Section VIII, Division 1. "U" Certificate of Authorization No. 4241 expires December 31, 2008

Date 01/31/2006 Co. name Air-X-Changers, A Harsco Company Signed Janine K. Jemel  
(Manufacturer) (Representative)

#### CERTIFICATE OF SHOP/FIELD INSPECTION

Vessel constructed by Air-X-Changers, A Harsco Company at 5215 Arkansas Road, Catoosa, Oklahoma, 74015, USA, I, the undersigned, holding a valid commission issued by The National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province OK, KS, MO and employed by OneBeacon America Insurance Co., of Boston, MA have inspected the component described in this Manufacturer's Data Report on January 31, 2006 and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel in accordance with ASME 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 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 01/31/2006 Signed B. J. Poirer Commissions 7376A, OK652, KS356, MO0132  
(Authorized Inspector) (Nat'l Board (incl. endorsements), State, Prov. and No.)

**FORM U-2A MANUFACTURER'S PARTIAL DATA REPORT (ALTERNATIVE FORM)**

**A Part of a Pressure Vessel Fabricated by One Manufacturer for Another Manufacturer  
As Required by Provisions of the ASME Code Rules, Section VIII, Division 1**

1. Manufactured and certified by Professional Fabricators Inc. 2765 E. Dawson Rd. Tulsa, OK, 74110  
(Name and address of Manufacturer)
2. Manufactured for air-x-changers 5215 Arkansas Rd. Catoosa, Ok 74015  
(Name and address of Purchaser)
3. Location of installation Unknown  
(Name and address)
4. Type Box Header 052204.3 FR/BK  
(Description of vessel part (shell, two-piece head, tube bundle)) (Mfg's serial no.)  
052204-HDR-3 air-x-changers 2005  
(Nat'l Bd. No.) (Drawing No.) (Drawing prepared by) (Year Built)
5. ASME Rules, Section VIII, Div. 1 2004 05A  
(Edition and Addenda (date)) (Code Case No.) (Special Service per UG-120(d))
6. Shell (a) No. of course(s): \_\_\_\_\_ (b) Overall Length (ft & in.): 2' 11.25"

Course(s)			Material		Thickness		Long. Joint (Cat. A)			Circum. Joint (Cat. A, B, & C)			Heat Treatment	
No.	Diameter, in.	Length (ft & in.)	Spec./Grade or Type		Nom.	Corr.	Type	Full, Spot, None	Eff.	Type	Full, Spot, None	Eff.	Temp.	Time
-	8.25	2' 11.25"	SA 516-70N		1									

Ends SA 516-70N										Wrappers SA 516-70N				
(Mat'l Spec. No., Grade or Type) (H.T.- Time & Temp.)										(Mat'l Spec. No., Grade or Type) (H.T.- Time & Temp.)				
Location (Top, Bottom, Ends)	Thickness		Radius		Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diam.	Side to Pressure		Category A			
	Min.	Corr.	Crown	Knuckle					Convex	Concave	Type	Full, Spot, None	Type	
(a) Ends	0.75							7.6875		6.1675				
(b) Wrappers	0.25							7.6875		2' 11.25"				

If removable, bolts used (describe other fastenings) \_\_\_\_\_

(Mat'l, Spec. No., Gr., Size, No.)

8. MAWP \_\_\_\_\_ psi at max. temp. \_\_\_\_\_ °F Min. design Metal temp. \_\_\_\_\_ °F at \_\_\_\_\_ Psi.  
(internal) (external) (internal) (external)

9. Impact test Impact Exempt per UG 20 (f) at test temperature of \_\_\_\_\_ °F.  
(Indicate yes or no and the component(s) impact tested)

10. Hydro., pneu., or comb. test press. \_\_\_\_\_ Proof test \_\_\_\_\_

11. Nozzles, inspection and safety valve openings:

Purpose (inlet, Outlet, Drain, etc.)	No.	Dia. or Size	Flange Type	Material		Nozzle Thickness		Reinforcement Material	How Attached		Location (Insp. Open)
				Nozzle	Flange	Nom.	Corr.		Nozzle	Flange	
Inlet/Outlet	2	8	300#RFWN	SA 106B	SA 105	SCH-80			UW16.1	UW16.1	FR/BK

12. Identification of part(s)

Name of Part	Quantity	Line No.	Mfr's Identification No.	Mfr's Drawing No.	CRN	National Board No.	Year Built

12. Supports: Skirt \_\_\_\_\_ Lugs \_\_\_\_\_ Legs \_\_\_\_\_ Other \_\_\_\_\_ Attached \_\_\_\_\_  
(Yes or no) (No.) (No.) (Describe) (Where and how)

13. Remarks: Design and calculations by others.

**CERTIFICATE OF SHOP/FIELD COMPLIANCE**

We certify that the statements made in this report are correct and that all details of material, construction, and workmanship of this pressure vessel part conform to the ASME Code for Pressure Vessels, Section VIII, Division 1.

"U" Certification of Authorization No.

Date 11/18/2005

Name

33341

Expires

18-Apr-08

Professional Fabricators, Inc.

Signed

[Signature]  
(Representative)

(Manufacturer)

**CERTIFICATE OF SHOP/FIELD INSPECTION**

I, the undersigned, holding a valid commission issued by the Nation Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of OK and employed by OneBeacon Ins. Of America of Boston, Ma. have inspected the

pressure vessel part described in this Manufacturer's Data Report on 12-7-05 and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel part in accordance with ASME 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 part described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his 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

12-7-05

Signed

[Signature]  
(Authorized Inspector)

Commissions

[Signature]

[Nat'l Board (incl. Endorsements), State, Prov. and No.]