## 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) As Required by the Provisions of the ASME Boiler and Pressure Vessel Code Rules, Section VIII, Division 1 Header Volume (cu.ft.) 1. Manufactured and certified by Harsco Industrial Air-X-Changers, 5215 Arkansas Road, Catoosa, Oklahoma, 74015, USA (Name and address of Manufacturer) 2. Manufactured for EXTERRAN (H) - 690349, P.O. BOX 690349, HOUSTON, Texas, 77269, USA (Name and address of Purchaser) 3. Location of Installation UNKNOWN (Name and address) Heat Exchanger 14001353.3 N/A HDR-2-3, REV2 85383 2014 4. Type (Horizontal or vertical, tank) (Manufacturer's serial number) (CRN) (Drawing number) (National Board number) (Year built) 5. ASME Code, Section VIII, Division 1 2013/ N/A N/A N/A [Edition and Addenda, if applicable (date)] (Code Case numbers) (Special service per UG-120(d)) 6. Shell: **SA106 GR.C** N/A N/A 1 in 0 in(Nominal thickness) (Corr. allow.) (Inner diameter) (Material spec. number, grade) [Length (overall)] Body Flanges on Shells Bolting How Flange ID Bolting No. Туре OD Min Hub Thk Material Location Washer (OD, ID, Washer Attached Thk Num & Size Material thk) Material N/A C=.20 N/A N/A 7. Seams: Seamless 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) (Time, hr) [Girth. (welded, dbl., sngl., lap, butt)] [R.T. (spot or full)] (Eff., %) (No. of courses) 8. Heads: (a) Material (b) Material SA516 70 (Spec. no., grade) (Spec. no., grade) Location (Top, Bottom, Knuckle Radius Elliptical Ratio Conical Apex Hemispheri Flat Diameter Side to Pressure (Convex or Minimum Corrosion Crown Radius Thickness cal Radius Ends) Allowance Angle Concave) (a) **ENDS** .625' 0 N/A N/A N/A N/A N/A 6.5" x 6.5" N/A Body Flanges on Heads Boltina Min Hub Bolting Material Washer (OD, No. Location Type ID OD Flange Thk Material How Attached Washer Material Thk Num & Size N/A N/A N/A N/A N/A N/A N/A (a) N/A N/A N/A N/A at max. temp. 9. MAWP 64<u>5 psi</u> N/A 350 °F N/A (External) (Internal) (External) -20 °F Min. design metal temp. 645 psi Hydro, pneu., or comb. test pressure HYDRO. at 839 psi at Proof test N/A 10. Nozzles, inspection and safety valve openings: Material Nozzle Thickness Attachment Details Purpose (Inlet, Outlet, Drain, Diameter Reinforcement Location No Туре or Size Material (Insp. Open.) etc.) Nozzle Flange Nom Nozzle Flange SCH-160 IN/OUT 2 2" 300# RFWN **SA106 GR.B SA105** Welded Welded Weld Header DRAIN 2 0.75" **CPLG SA105** 6000# Weld Welded Welded Nozzle 11 Supports: Skirt Other Attached NO Lugs N/A Legs N/A Structure **Bolted** (Yes or no) (Number) (Number) (Where and how) (Describe) 12. Remarks: Manufacturer's Partial Data Reports properly identified and signed by Commissioned Inspectors, have been furnished for the following items of the report:

2) Pay Handers SN 14001252 2 ED/DV. Professional Enhancements Inc.

(2) Box Headers, SN 14001353.3 FR/BK, Professional Fabricators Inc.

(Name of part, item number, Manufacturer's name and identifying stamp)

Line 6 - -Tube and Plug Dimensions OR Header Dimensions: 8.5000" X 8.5000" X 1' 6.6875"

Straight length of tubes, OR, Distance between the headers: 8' 0.0"

(A) TUBES: 26 x .625" OD, Gauge: 16BWG, Material: SA214 Rolled Tube Sheet (B) INSP.OPENINGS: 52, Type: 3/4X16UNF-Threaded, Material: SA105 (C) IMPACT REQUIREMENTS: Box Cold Formed & heat treated in accordance with UG-79 & UCS-79. Box, Pipe & Flange Impact Exempt per: UG-20(f).

FORM U-1A (Back)

NB Number 85383

conform to the ASM		CERTIFICATE OF SHOP/FIELD Code in this report are correct and that all de D PRESSURE VESSEL CODE, Section \	tails of design, material,					
Date 07/30/2014	Co. name	Harsco Industrial Air-X-C	hangers	Signed	Genresentative			
		(Manufacturer)	EIEL D INIODEOTION		(Ayohi eseilialive)			
		CERTIFICATE OF SHOP	FIELD INSPECTION					
Vessel constructed	by	Harsco Industrial Air-X-Changers	at 5215 Arkansas Road,	Catoosa, Oklaho	toosa, Oklahoma, 74015, USA			
I, the undersigned, I	holding a valid	commission issued by The National Board	d of Boiler and Pressure	Vessel Inspecto	ors and employed by			
OneCIS Insurance Com	pany, of Lynn, MA	1						
and state that, to the AND PRESSURE V warranty, expressed	e best of my kr 'ESSEL CODE d or implied, co	scribed in this Manufacturer's Data Report lowledge and belief, the Manufacturer has , Section VIII, Division 1. By signing this encerning the pressure vessel described in the in any manner for any personal injury or	s constructed this pressur certificate neither the Ins n this Manufacturer's Data	re vessel in acc pector nor his/h a Report. Furth	er employer makes any ermore, neither the Inspector			
Date07/31/2	2014 Sig	ned Paure (Althorized Inspector)	Commissions		652, KS356, MO0132 ard (incl. endorsements)]			

2042769 exe: v6.4.28 Form and version: U1A-18

## 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 the Provisions of the ASME Boiler and Pressure Vessel Code Rules, Section VIII, Division 1

1.	Manufac	nufactured and certified by Professional Fabricators Inc., 2765 E. Dawson Rd., Tulsa, OK 74110 (Name and address of Manufacturer)																	
2.	Manufactured for Harsco Industrial Air-X-Changers, 5215 Arkansas Road, Catoosa, OK 74015  (Name and address of Purchaser)																		
3.	Location	cation of installation Unknown (Name and address)																	
4.	Туре		Heat Exchanger 14001353.3 FR/BK - [Description of vessel part (shell, two-piece head, tube bundle)] (Manufacturer's serial number) (CRN)																
		- 14001353-HDR-2-3 Harsco Indus								co indust	rial Ai	Air-X-Changers 2014							
5.	(National Bo			VIII Div	1	rawing numb	13		-	( Drawin		red by )							
					[	dition and A	ddenda (date)			e number)				• •	vice per VG-120 6875"	(d)]			
6.	Shell: (a)	Numb	er or	course(s)				(b) Overa	all length	' 									
	,	ourse(		on oth		laterial		Thickness	T Tre	Type Full, Spot, None							reatment Time		
No.	Diamet 8.5"		_	ength 5.6875"		sc./Grade or Type         Nom.         Corr.         Type         Full, Spot, None         Eff.         Type         Full, Spot, None         Eff.						-	-						
													÷						
_							I	Body Fla	inge on	Shells	Т				Bolting				
No.	Туре	Type ID OD		OD	Flange Thk	Min Hub Thk	Materia	al How A	Attached	ached Location					Washer	Washer (OD,			
			-+		_							Num & S	Size Bolting Material		nati ID, in	k) Was	her Material		
											$\Box$								
			_								$\dashv$	<del></del>							
	<u> </u>																		
7.	Heads: (	a) _	_	(Mater	ial spec. numb	SA516 er, grade or		ne and temp.)		(b)		(Malerial sp	pec. nún	nber, grade or	type ) (H.Ttime	and temp.)			
	Location (	Тор,		Thickness		Radius	Ellip	tical Conic	cal Hem	ispherical	Fla			ressure		ategory A			
	Bottom, E		Mi				ickle Ra	tio Apex A	ingle F	Radius	Diame			Concave 6.5"	Type	Full, Spot,	None Eff.		
(a) (b)	Ends		0.62		-   -	-								-					
								Body Fla	nge on	Heads									
-	1		$\neg$		Flange	Min Hub									Bolting				
No.	Туре	10	1	OD	Thk	Thk	Materi	al How A	Attached	Locatio	on [	Num & S	Size Bolting Material		Washer ID, Th	.0003	Vasher Material		
-																			
					1														
<u> </u>																			
_	0.00.000									- F.	Min	design m	otal to	amn	F	at	psi.		
8.	MAWP	(Inte	mal)	(Ext	- psi a emal)	it max. te	mp.	(Internal)	(Exte		WIIII.	acagn m	iciai ii		<u> </u>	u	— Po		
9.	Impact to	est .								No									
40			1000					et t t -					,	-					
w	Hvdro r	neu.	orc	omb. tes	t press.			(Indicate y	es or no and	the compone		npad tested	1		_				
11.	Hydro., p Nozzles,	neu. inspe	, or c	omb. tes	t press. fety valve	openings		•	es or no and	the compon		npad tested	1						
11.	Hydro., p Nozzles, Purpose (Inle	inspe	, or c	omb. tes	t press. fety valve	openings	): 	•	es or no and	the compon	st _			orcement		ent Details	Location		
11.	Nozzles, Purpose (Inleate, Drain, e	inspe et, etc.)	No.	n, and sa Diameter or Size	fety valve	No	Mat	erial Flang	ge	Proof te:  Nozzle T	hickne	ss T.	Reinfo	aterial	Nozzle	Flange	(Insp. Open.)		
11.	Nozzies, Purpose (Inle attet, Drain, e Inlet/Outlet	inspe et, etc.)	No.	Diameter or Size	Type 300#RFWN	No SA	: Mat	erial	ge 05	Proof te	st _	ss T.	Reinfo				1 1		
11.	Nozzles, Purpose (Inleate, Drain, e	inspe et, etc.)	No.	n, and sa Diameter or Size	fety valve	No SA	Mat ozzle 106 B	erial Flang SA10	ge 05	Proof te:  Nozzle T	hicknes	SS T.	Reinfo	aterial -	Nozzle UW16.1	Flange UW16.1	(Insp. Open.) FR/BK		
11.	Nozzles, Purpose (Inle attet, Drain, e Inlet/Outlet AUX	inspe et, etc.)	No.	Diameter or Size	Type 300#RFWN 6000#	No SA	Mat ozzle 106 B	erial Flang SA10	ge 05	Proof te:  Nozzle T	hickne:	SS T.	Reinfo	aterial -	Nozzle UW16.1 UW16.1	Flange UW16.1	(Insp. Open.) FR/BK FR/BK		
11. Ot	Nozzles, Purpose (Inlet, Drain, e Inlet/Outlet AUX	inspe et, etc.)	No.	Diameter or Size	Type 300#RFWN 6000#	No SA	Mat ozzle 106 B	erial Flang SA10	ge 05	Proof te:  Nozzle T	hickne:	SS T.	Reinfo	aterial	Nozzle UW16.1 UW16.1	Flange UW16.1 UW16.1	(Insp. Open.) FR/BK FR/BK		
11. Ot	Purpose (Inlet/Outlet AUX	inspect, etc.)	No. 2 2	Diameter or Size	Type 300#RFWN 6000#	No.	Mat ozzle 106 B	erial Flang SA10 SA10	ge	Nozzle T Nom SCH-160	hicknes	SS T. CRN	Reinfo	aterial  	Nozzle UW16.1 UW16.1	Flange UW16.1 UW16.1	(Insp. Open.) FR/BK FR/BK		
11. Ot	Nozzles, Purpose (Inle  utlet, Drain, a Inlet/Outlet  AUX  Identificat	inspect, etc.)	No. 2 2	Diameter or Size 2" .75"	Type 300#RFWN 6000# Line No	No.	Mat zzzle 106 B 	erial Flang SA10 SA10	ge	Nozzle T Nom SCH-160	hicknes	SS T.	Reinfo	aterial National	Nozzle	Flange UW16.1 UW16.1	(insp. Open.) FR/BK FR/BK		
11. Ot	Nozzles, Purpose (Inle  utlet, Drain, a Inlet/Outlet  AUX  Identificat	inspect, etc.)	No. 2 2	Diameter or Size 2" .75"	Type 300#RFWN 6000#	No.	Mat vzzle 106 B    fr's. Identific	erial Flang SA10 SA10 ation No.	ge	Nozzle T Nom SCH-160	hicknes	CRN	Reinfo	aterial National	Nozzie UW16.1 UW16.1	Flange UW16.1 UW16.1	(insp. Open.) FR/BK FR/BK		
11.	Nozzles, Purpose (Inle  utlet, Drain, a Inlet/Outlet  AUX  Identificat	inspect, etc.)	No. 2 2	n, and sa Diameter or Size 2" .75"	Type 300#RFWN 6000# Line No	No. No.	Material Mat	erial Flang SA10 SA10 ation No.	ge 0.05 0.05 Mfr's. (	Nozzle T Nom SCH-160 Drawing No	hicknes	CRN	Reinfo Ma	aterial National	Nozzie UW16.1 UW16.1	Flange UW16.1 UW16.1 Yea	(Insp. Open.) FR/BK FR/BK FBuilt		
11. Ou 12.	Nozzles, Purpose (Inle  detet, Drain, e  Inlet/Outlet  AUX   Identificat  Name of Pa   Supports:	inspect, letc.)	No. 2 2	Diameter or Size 2" .75"	Type 300#RFWN 6000# Line No	No.	Material Mat	erial Flang SA10 SA10 ation No.	ge	Nozzle T Nom SCH-160 Drawing No	St	CRN	Reinfo Ma	naterial	Nozzie UW16.1 UW16.1	Flange UW16.1 UW16.1	(Insp. Open.) FR/BK FR/BK FBuilt		
11. Ou 12.	Nozzles, Purpose (Inle  titet, Drain, e  Inlet/Outlet  AUX  Identificat  Name of Pa	inspect, letc.)	No. 2 2	n, and sa Diameter or Size 2" .75"	Type 300#RFWN 6000# Line No	No. SA	Matozzle 106 B fr's. Identific Leeer) Design an	erial Flang SA10 SA10 ation No.  gs (No.	ge 055 05 Mfr's. 1	Nozzle T Nom SCH-160 Drawing No	St	CRN (Describe	Reinfo Ma	naterial	Nozzie UW16.1 UW16.1	Flange UW16.1 UW16.1 Yea	(Insp. Open.) FR/BK FR/BK FBuilt		

## Form U-2A (Back)

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 BOILER AND PRESSURE VESSEL CODE, Section VIII, Division 1.								
U Certificate of Authorization No. 33,341 Expires April 18, 2017								
Date July 15, 2014 Name Professional Fabricators, Inc. Signed								
(Manufacturer) (Representative)								
CERTIFICATE OF SHOP / FIELD INSPECTION								
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 Oklahoma and employed by OneCIS Insurance Company of Lynn, MA								
have inspected the pressure vessel part described in this Manufacturer's Data Report on  July 15, 2014								
and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel part in accordance with								
ASME BOILER AND PRESSURE VESSEL CODE, Section VIII, Division 1. By signing this certificate neither the Inspector nor his/her employer								
ASME BOILER AND PRESSURE VESSEL CODE, Section VIII, DIVISION 1. By signing this certificate relation to heper positives								
makes any warranty, expressed or implied, concerning the pressure vessel part 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.								
1) m d A								
Date 7/16/2014 Signed Kussell ( aylon Commissions NB 14411A OK 1176								
( Authorized Inspector ) [Natl Board (incl. endorsements), State, Province, and number]								