

FORM U-1A MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS PO #: PO18100F-REVISED:2
(Alternative Form for Single Chamber, Completely Shop or Field Fabricated Vessels Only) Item #: HRS-ACC-1
As Required by the Provisions of the ASME Boiler and Pressure Vessel Code Rules, Section VIII, Division 1

1. Manufactured and certified by Kelvion, Inc. Thermal Solutions 5202 West Channel Road Catoosa, Oklahoma 74015
(Name and address of Manufacturer)

2. Manufactured for Frew Process Group, LLC 15305 Stony Creek Way Noblesville IN 46060 United States
(Name and address of Purchaser)

3. Location of installation Aemerge Redpak Services SC, LLC 9600 E Avenue TAG: PO# 44 #9391468 Hesperia CA 92345 United States
(Name and address)

4. Type Rectangular Vessel R-10746-1-B N/A 10746010HDR REV. 2 10111 2017
(Horizontal or vertical, tank) (Manufacturer's serial number) (CRN) (Drawing number) (National Board number) (Year built)

5. ASME Code, Section VIII, Division 1 2015 N/A N/A
[Edition and Addenda, if applicable (date)] (Code Case numbers) [Special cervice per UG-120(d)]

6. Shell SA516-70 1" 1/16" 6 3/4" *
(Material spec. number, grade) (Nominal thickness) (Corr. allow.) (Inner Diameter) (Length (overall))

Body Flanges on Shells													
No.	Type	ID	OD	Flange Thk	Min Hub Thk	Material	How Attached	Location	Bolting				
									Num & Size	Bolting Material	Washer (OD, ID, thk)	Washer Material	

7. Seams Corner Joint N/A 100% N/A N/A N/A N/A 100% N/A
[Long (welded, dgl., sngl., lap, butt)] [R.T. (spot or full)] (Eff., %) (H.T. temp.) (Time, hr) [Girth (welded, dgl., sngl., lap, butt)] [R.T. (spot or full)] (Eff., %) (No. of courses)

8. Heads: (a) Material SA516-70 (b) Material SA516-70
(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) Top & Bottom	7/8" / 3/4"	1/16"	SPAN	**	N/A	N/A	N/A	FT: 9 1/2" X 13' 3/8" RT: 7 3/8" X 13' 3/8"	N/A
(b) End Plates	7/8" / 3/4"	1/16"	SPAN	**	N/A	N/A	N/A	FT: 9 1/2" X 1' 1 7/8" RT: 7 3/8" X 1' 1 7/8"	N/A

Body Flanges on Heads													
Location	Type	ID	OD	Flange Thk	Min Hub Thk	Material	How Attached	Bolting					
								Num & Size	Bolting Material	Washer (OD, ID, thk)	Washer Material		
(a)													
(b)													

9. MAWP 340 PSI N/A at max. temp. 475°F N/A
(Internal) (External) (Internal) (External)

Min. design metal temp. 25°F at 340 PSI Hydro., pneu., or comb. Test pressure 442 PSI

Proof test N/A

10. Nozzles, inspection, and safety valve openings:

Purpose (Inlet, Outlet, Drain, ect.)	No.	Diameter or Size	Type	Material		Nozzle Thickness		Reinforcement Material	Attachment Details		Location (Insp. Open.)
				Nozzle	Flange	Nom.	Corr.		Nozzle	Flange	
INLET	2	10"-300#	PIPE/RFWN	SA106-B	SA105	SCH 140	1/16"	INTEGRAL	UW16.1(a)	N/A	FT HEADER
OUTLET	2	8"-300#	PIPE/RFWN	SA106-B	SA105	SCH 120	1/16"	INTEGRAL	UW16.1(a)	N/A	RT HEADER
VENT/DRAIN	2/2	1"	CPLG	SA105	N/A	6000#	1/16"	INTEGRAL	UW16.1(a)	N/A	FT/RT HEADER
AUXILLARY	8	3/4"	CPLG	SA105	N/A	6000#	1/16"	INTEGRAL	UW16.1(a)	N/A	INLET/OUTLET
											NOZZLES

11. Supports: Skirt N/A Lugs N/A Legs N/A Other N/A Attached N/A
(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 N/A
(Name of part, item number, Manufacturer's name and identifying stamp)

TUBES: (336) SA-214 1" O.D. X 0.083" MW X 32' STRAIGHT & FINNED / BUNDLE: 6 ROW 1 PASS
 CONSTRUCTED IN ACCORDANCE WITH APPENDIX 28 / CHARPY IMPACT EXEMPT PER UG-20(f) UCS-66(c)
 *FT: 1' 3 5/8" X 13' 3/8" RT: 1' 3 3/8" X 13' 3/8" / FT: 9 1/2" RT: 7 3/8"

FORM U-1A (Back)

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 12007

expires 3 June 2017

Date 1/8/17

Co. name Kelvion, Inc. Thermal Solutions
(Manufacturer)

Signed [Signature]
(Representative)

CERTIFICATE OF SHOP/FIELD INSPECTION

Vessel constructed by Kelvion, Inc. Thermal Solutions at 5202 West Channel Road Catoosa, Oklahoma 74015

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and employed by ONECIS INSURANCE COMPANY OF LYNN, MA

have inspected the component described in this Manufacturer's Data Report on 1/8/17, 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/her employer makes any warranty, expressed or implied, concernin 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 1/9/17

Signed [Signature]
(Authorized Inspector)

Commissions NB12736A OK914
[National Board (incl. endorsements)]