

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

(Alternative Form for Single Chamber, Completely Shop or Field Fabricated Vessel Only)

As Required by the Provisions of the ASME Boiler and Pressure Vessel Code Rules, Section VIII, Division 1

1. Manufactured and certified by **Chart Cooler Service Company, Inc., 3515 Dawson Road, Tulsa, Oklahoma, 74115**
(Name and address of Manufacturer)
2. Manufactured for **KP Engineering, 5555 Old Jacksonville Hwy, Tyler, Texas, 75703**
(Name and address of Purchaser)
3. Location of Installation **Unknown**
(Name and address)
4. Type **Air Cooled Heat Exch**
(Horizontal or vertical, tank)
5. ASME Code, Section VIII, Division 1 **2013/ N/A**
[Edition and Addenda, if applicable (date)]
6. Shell: **SA-516 70** **1"** **0.125"** **N/A** **N/A**
(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
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

7. Seams: **Corner Joint** **N/A** **C=.20** **1150 °F** **1** **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 **SA-516 70** (b) Material **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)	Top / Bottom	0.5"	0.125"	N/A	N/A	N/A	N/A	N/A	10' 9.875" x 2.75"	N/A
(b)	End	0.5"	0.125"	N/A	N/A	N/A	N/A	N/A	7.4375" x 2.75"	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)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

9. MAWP **225 psi** **15 psi** at max. temp. **400 °F** **N/A**
(Internal) (External) (Internal) (External)
- Min. design metal temp. **-20 °F** at **225 psi** Hydro, pneu., or comb. test pressure **HYDRO AT at 293 psi**
- Proof test **N/A**

10. 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	
Inlet / Outlet	4	3"-300#	RFWN	SA-106 B	SA-105	Sch. 160	0.125"	Integral	UW16.1a	UW16.1a	Wrapper
Temp / Press	4	1"-300#	RFWN	SA-106 B	SA-105	Sch. 160	0.125"	Integral	UW16.1a	UW16.1a	Wrapper
Vent / Drain	2	1"-300#	RFWN	SA-106 B	SA-105	Sch. 160	0.125"	Integral	UW16.1a	UW16.1a	Wrapper
Inspection	444	1.125"	SHLD	SA-105	N/A	N/A	N/A	N/A	N/A	N/A	Plugsheet

11. Supports: Skirt **No** Lugs **8** Legs **None** Other **Nameplate Bracket** Attached **Header / Welded**
(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)

Line 6 - -Tube and Plug Dimensions OR Header Dimensions: 8.75" X 5.0" X 10' 9.875"

Straight length of tubes, OR, Distance between the headers: 32' 0.0"

1. Constructed per Appendix 28, 2.No relief device per UG-125, 3.Impact testing exempt per UCS-66 & UCS-68(c), 4.Tube 1" x .109"MW, SA-214, Quantity 222, 5.Service: "UNIFINER STRIPPER BOTTOMS AIR COOLER" 6. RT per customer's request

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 36229 expires November 30, 2018

Date 03/01/2016 Co. name Chart Cooler Service Company, Inc. Signed Jay England (Manufacturer) (Representative)

CERTIFICATE OF SHOP/FIELD INSPECTION

Vessel constructed by Chart Cooler Service Company, Inc. at 3515 Dawson Road, Tulsa, Oklahoma, 74115 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 March 1, 2016 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, 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 03/01/2016 Signed William B. Baurisch (Authorized Inspector) Commissions 12752A, OK951 (National Board (incl. endorsements))