

**FORM U-1 MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS**  
As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

PO 0735-439

1. Manufactured and certified by: Refrigeration Valves And Systems Corporation, 1520 Crosswind Dr., Bryan, TX 77808  
(Name and address of Manufacturer)

2. Manufactured for: ARCTIC REFRIGERATION INC., 4930 LITTLE CT., ELLICOTT CITY, MD 21043  
(Name and address of Purchaser)

3. Location of installation: PEPSI-COLA, 429 INDUSTRIAL PARK DR., JOHNSTOWN, PA  
(Name and address)

4. Type: VERT. 72" X 13' 3" RECEIVER 45779  
(Horiz, vert. or sphere) (Tank, separator, jkt., vessel, heat exh, etc.) (Mfg.'s serial No.)  
--- 45779D REV.0 22863 2011  
(CRN) (Drawing No.) (Mat'l Bd No.) (Year built)

5. ASME Code, Section VIII, Div. 1 2007 2009b --- ---  
Edition and Addenda (date) Code Case No. Special Service per UG-120(d)

Items 6-11 incl. to be completed for single wall vessels, jackets of jacketed vessels, shell of heat exchangers, or chamber of multi-chamber vessels.

6. Shell (a) No. of course(s): 1 (b) Overall length (ft. & in.): 9' 11"

No.	Course(s)		Material		Thickness		Long. Joint (Cat. A)			Circum. Joint (Cat. A, B & C)			Heat Treatment	
	Out. Dia. in.	Length (ft. & in.)	Spec./Grade or Type		Nom.	Corr.	Type	Full, Spot, None	Eff.	Type	Full, Spot, None	Eff.	Temp.	Time (hr.)
1	72	9' 11"	SA516-70		.625	0	1	SPOT	85	2	NONE	65	---	---

7. Heads: (a) SA516-70 NO HT (b) SAME  
(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 Diameter	Side to Pressure (Convex or Concave)	Category A		
		Min.	Corr.	Crown	Knuckle						Type	Full, Spot, None	Eff.
(a)	TOP	.533	0	---	---	2:1	---	---	---	CONCAVE	--	---	--
(a)	BOT	.533	0	---	---	2:1	---	---	---	CONCAVE	--	---	--

If removable, bolts used (describe other fastening) \_\_\_\_\_  
(Mat'l Spec. No., Grade, Size, No.)

8. Type of jacket --- Jacket closure ---  
(Describe as ogee & weld, bar, etc.)

If bar, give dimensions ---  
9. MAWP 250 --- psi at max. temp. +300 --- °F Min. design metal temp. -20 °f at 250 psi.  
(internal) (external) (internal) (external)

10. Impact test NO UG-20-f at test temperature of --- °F  
(Indicate yes or no and the component(s) impact tested)

11. Hydro., pneu., or comb. test press 325 Proof test ---

Items 12 and 13 to be completed for tube sections

12. Tubesheet ---  
Stationary (Mat'l Spec. No.) Dia. in. (subject to press) Nom. thk. in. Corr. Allow., in. Attachment (welded or bolted)

13. Tubes: ---  
Floating (Mat'l Spec. No.) Dia. in. Nom. thk. in. Corr. Allow., in. Attachment

Items 14-18 to be completed for inner chambers of jacketed vessels or channels of heat exchangers.

14. Shell (a) No. of course(s): --- (b) Overall length (ft. & in.): ---

No.	Course(s)		Material		Thickness		Long. Joint (Cat. A)			Circum. Joint (Cat. A, B & C)			Heat Treatment	
	Out. Dia. in.	Length (ft. & in.)	Spec./Grade or Type		Nom.	Corr.	Type	Full, Spot, None	Eff.	Type	Full, Spot, None	Eff.	Temp.	Time (hr.)

15. Heads: (a) --- (b) ---  
(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 Diameter	Side to Pressure (Convex or Concave)	Category A		
		Min.	Corr.	Crown	Knuckle						Type	Full, Spot, None	Eff.
(a)	---	---	---	---	---	---	---	---	---	---	---	---	---
(b)													

If removable, bolts used (describe other fastening) \_\_\_\_\_  
(Mat'l Spec. No., Grade, Size, No.)

16. MAW P --- (internal) --- (external) psi. at max. temp. --- (internal) --- (external) °F Min. design. metal temp. --- °F at --- psi.
17. Impact test --- at test temperature of --- (Indicate yes or no and the component(s) impact tested)
18. Hydro, pneu, or comb, test press. --- Proof test ---
19. Nozzles, inspection, and safety valve openings:

Purpose (Inlet Outlet, Drain, etc.)	No.	Diameter or Size	Flange Type	Material		Nozzle Thickness		Reinforcement Material	How Attached		Location (Insp. Open.)
				Nozzle	Flange	Nom.	Corr.		Nozzle	Flange	
MISC.	1,1	8,6	---	SA106B	---	S/40	0	SA516-70	*	---	
MISC.	2	4	---	SA106B	---	S/40	0	SA516-70	*	---	
MISC.	2,2	2,1-1/2	---	SA106B	---	S/80	0	INHERENT	*	---	
MISC.	1,3	1,3/4	---	SA106B	---	S/80	0	INHERENT	*	---	
MISC.	1	1/2	---	SA106B	---	S/80	0	INHERENT	*	---	

20. Supports: Skirt NO (Yes or no) Lugs 0 (No.) Legs 3 (No.) Others NONE (Describe) Attached WELDED TO SHELL AND BOTTOM HEAD (Where and how)

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

N/A

22. Remarks: PRESSURE RELIEF DEVICE SUPPLIED BY OTHERS.

\* WELDED IN ACCORDANCE WITH FABRICATION DRAWING.  
FOR NON-LETHAL, NON-CORROSIVE SERVICE.  
TESTED IN VERTICAL POSITION.

**CERTIFICATE OF SHOP 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. 18912 Expires Oct. 10, 2013

Date 3-13-11 Name Refrigeration Valves and Systems Corporation (Manufacturer) Signed [Signature] (Representative)

**CERTIFICATE OF SHOP 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 Texas and employed by Onebeacon America Insurance Company of Lynn, MA have inspected the pressure vessel described in this Manufacturer's Data Report on 3-7, 20 11, 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 3-14-11 Signed [Signature] (Authorized Inspector) Commissions NB#12355 ISAI TX168 (Nat'l Board incl. Endorsement, State, Province and No.)

**CERTIFICATE OF FIELD ASSEMBLY COMPLIANCE**

We certify that the statements on this report are correct and that the field assembly construction of all parts of this vessel conforms with the requirements of ASME Code, Section VIII, Division 1.

U Certificate Authorization No. \_\_\_\_\_ Expires \_\_\_\_\_, 20 \_\_\_\_\_

Date \_\_\_\_\_ Name \_\_\_\_\_ Signed \_\_\_\_\_ (Assembler) (Representative)

**CERTIFICATE OF FIELD ASSEMBLY 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 \_\_\_\_\_ and employed by \_\_\_\_\_ of \_\_\_\_\_ have compared the statements in this Manufacturer's Data Report with the described pressure vessel and state that the parts referred to as data items \_\_\_\_\_, not included in the certificate of shop inspection, have been inspected by me and to the best of my knowledge and belief, the Manufacturer has constructed and assembled this pressure vessel in accordance with ASME Code, Section VIII, Division 1. The described vessel was inspected and subjected to a hydrostatic test of \_\_\_\_\_ psi. By signing this certificate neither the Inspector nor his employer makes any warranty, express or implied, concerning the pressure vessel described in this Manufacturer's Data Report. Furthermore, neither the Inspector or 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 \_\_\_\_\_ Signed \_\_\_\_\_ (Authorized Inspector) Commissions \_\_\_\_\_ (Nat'l Board incl. Endorsement, State, Province and No.)