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

**CHERRY-BURRELL-2, A UNITED DOMINION CO.**

1. Manufactured and certified by **575 EAST MILL ST., LITTLE FALLS, NY 13365**

(Name and address of Manufacturer)

2. Manufactured for **CHERRY-BURRELL PROCESS EQUIP., P.O. BOX 35600, LOUISVILLE, KY**

(Name and address of Purchaser)

3. Location of installation **HUNT WESSON, 29180 GLENWOOD RD., PERRYSBURG, OH 43551**

(Name and address)

4. Type: **VERTICAL** **VESSEL WITH HEAT TRANSFER SURFACE** **E-314-94**

(Horiz., vert., or sphere)

(Tank, separator, jkt. vessel, heat exch., etc.)

(Mfg's serial No.)

**E-314-94**

**4325**

**1995**

(CRN)

(Drawing No.)

**Rev.A**

(Mat'l. Bd. No.)

(Year Built)

5. ASME Code, Section VIII, Division 1 **1992ED A'93**

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.): **5' 10"**

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
1	85"	5' 10"	SA-240 304		.061	0								

7. 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		Category A		
		Min.	Corr.	Crown	Knuckle					Convex	Concave	Type	Full, Spot, None	Eff.
(a)														
(b)														

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

(Mat'l. Spec. No., Grade, size, No.)

8. Type of jacket **SEE ATTACHED FORM U4**

Jacket closure \_\_\_\_\_

(Describe as ogee & weld, bar, etc.)

If bar, give dimensions \_\_\_\_\_

If bolted, describe or sketch. \_\_\_\_\_

9. MAWP **100** psi at max. temp. **350** °F. Min. design metal temp. **-20** °F at **100** psi.  
(internal) (external) (internal) (external)

10. Impact test **NONE UHA - 51 (a)**

[Indicate yes or no and the component(s) impact tested]

11. Hydro., pneu., or comb. test press. **155** Proof test **BURST UG 101 (m)**

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)

\_\_\_\_\_ Floating (Mat'l Spec. No.)

Dia., in.

Nom. thk., in.

Corr. Allow., in.

Attachment

13. Tubes: \_\_\_\_\_  
Mat'l Spec. No., Grade or Type O.D., in. Nom. thk., in. or gauge Number Type (Straight or U)

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

14. Shell (a) No. of course(s): **1** (b) Overall length (ft & in.): **7' - 0"**

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
1	84"	7' - 0"	SA-240 316		.31	0	1	NONE	.7	1	NONE	.7	NO	

15. Heads: (a) **SA-240 316** (b) **SA-240 316**

(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		Category A		
		Min.	Corr.	Crown	Knuckle					Convex	Concave	Type	Full, Spot, None	Eff.
(a)	TOP	.26	0	67.2	8.4						X		SMLS	85%
(b)	BOTTOM	.26	0	67.2	8.4						X		SMLS	85%

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

(Mat'l Spec. No., Grade, size, No.)



**FORM U-1 (Back)**

16. MAWP 60 15 psi at max. temp. 350 350 °F. Min. design metal temp. -20 °F at 60 psi.  
(internal) (external) (internal) (external)

17. Impact test NONE UHA - 51 (a)  
(Indicate year or no and the component(s) impact tested)

18. Hydro., pneu., or comb. test press. 95 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	
MANWAY	1	18"		N1		.187	0	SA-240 304	WELDED		TOP HD
OUTLET	1	3"		N2		.21	0	NONE	WELDED		BTM HD
LEVEL CONN	1	3"		N2		.22	0	NONE	WELDED		MANWAY
CIP CONN	1	2"		N2		.16	0	NONE	WELDED		MANWAY
AIR INLET	1	2"		N3		.154	0	NONE	WELDED		M.H. COVER
HTS	8	1 1/4"		N4		.14	0	NONE	WELDED		HEAT TRANS

20. Supports: Skirt NO Lugs 6 Legs 6 Others \_\_\_\_\_ Attached WELDED, BTM HD  
(Yes or no) (No.) (No.) (Describe) (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)

19 (1) MANWAY COVER, NORTHLAND STAINLESS

22. Remarks: MANWAY SWING BOLTS 5/8-11 (8) SA-193 GR B8 WITH SB-588 C976 NUTS  
VESSEL TESTED IN VERTICAL POSITION

FOR NOZZLE MATERIAL SEE U-4 FORM

**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. 1859 Expires FEB. 28, 19 98

Date 23 March 1995 Name CHERRY-BURRELL-2, A UNITED DOMINION CO. Signed F. Burrell Taylor  
(Manufacturer) (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 NY and employed by KEMPER NATIONAL INSURANCE COS. of LONG GROVE, IL have inspected the pressure vessel described in this Manufacturer's Data Report on 3-27, 19 95, 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 3-27-95 Signed R. J. Foley Commissions NB9809A  
(Authorized Inspector) (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 of Authorization No. \_\_\_\_\_ Expires \_\_\_\_\_, 19 \_\_\_\_\_

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 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, 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 \_\_\_\_\_ Signed \_\_\_\_\_ Commissions \_\_\_\_\_  
(Authorized Inspector) (Nat'l Board Incl. endorsement, State, Province and No.)



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(Name and address of Manufacturer)

(Name and address of Purchaser)

(Name and address)

(Horiz., vert., or sphere)

(Tank, separator, heat exch., etc.)

(Mfg's serial No.)

(CRM)

(Drawing No.)

**Rev.A**

(Nat'l. Bd. No.)

(Year Built)

Remarks

**N4 - SA-312 304**

**Signed**

(Manufacturer)

## Commission

(Nat'l Board incl. endorsement, State, Province and No.)

REPRINT 2/92



# FORM R-2 REPORT OF ALTERATION

**in accordance with provisions of the National Board Inspection Code**

1. Work performed by: Custom Fabricating & Repair, Inc. 17  
(name of alteration organization) (Form R No.)  
1932 E. 26th Street, Marshfield, WI. 54449 PO# 31 / Job# 08332-0000  
(address) (P.O. No., Job No., etc.)

2. Owner: American Purpac Technologies, LLC  
(name)  
2215 S. York Road, Suite 400, Oak Brook, IL. 60523  
(address)

3. Location of installation: American Purpac Technologies, LLC  
(name)  
2924 Wyetta Drive, Beloit, WI. 53511  
(address)

4. Unit identification: Pressure Vessel Name of original manufacturer Cherry Burrell Corporation  
boiler, pressure vessel

5. Identifying nos.: E-314-94 4325 NA NA 1995  
(mfg. serial no.) (National Board no.) (jurisdiction no.) (other) (year built)

6. NBIC Edition / Addenda: 2001 2002  
(edition) (addenda)

Original Code of Construction for Item: ASME/Section VIII/Division I 1992/1993  
(name / section / division) (edition / addenda)

Construction Code Used for Alteration Performed: ASME/Section VIII/Division I 2001/2002  
(name / section / division) (edition / addenda)

7. Description of work, use supplemental sheet, Form R-4, if necessary: One fitting was cut out of tank manway cover and a 7 ga. T304ss SA240 blank was welded back in. Outlet fitting on tank bottom head was cut out and a 2 1/2" SA479 T316Lss ferrule was welded back in. Two fittings were cut out of tank manway neck and 7 ga. T304ss SA240 blanks were welded back in. A 2" & 3" SA479 T316Lss ferrules were welded into tank top head. A 6" SA351 CF3M Rosemount level spud was welded into tank top and bottom heads. A 14 ga. T304ss SA240 inverted cone was welded to tank bottom head for attachment of bottom outer wrap head. Alteration tag was welded on and tank was rehydroed.

Pressure Test, if applied 83 psi. MAWP 60 psi.

8. Replacement Parts: Attached are Manufacturer's Partial Data Reports or Form R-3s properly completed for the following items of this report: NA

(name of part, item number, data report type, mfr's name and identifying stamp)

9. Remarks: NA



**DESIGN CERTIFICATION**

I, Wayne S. Dworak, certify that to the best of my knowledge and belief the statements in this report are correct and that the Design Change described in this report conforms to the National Board Inspection Code.

National Board "R" Certificate of Authorization No. R-5595 expires on 6/8/06  
11/21/03 Custom Fabricating & Repair, Inc. Signed Wayne Dworak  
Date (name of design organization) (authorized representative)

**CERTIFICATE OF DESIGN CHANGE REVIEW**

I, R. Jamie Wertjes, holding a valid Commission issued by the National Board of Boiler and Pressure Vessel Inspectors and certificate of competency issued by the jurisdiction of WI. and employed by HSB CT of Hartford, CT. have reviewed the design change as described in this report and state that to the best of my knowledge and belief such change complies with the applicable requirements of the National Board Inspection Code. By signing this certificate, neither the undersigned nor my employer makes any warranty expressed or implied, concerning the work described in this report. Furthermore, neither the undersigned nor my employer shall be liable in any manner for any personal injury, property damage or loss of any kind arising from or connected with this inspection.

Date: 1/5/04 Signed: R. Jamie Wertjes Commissions NB 12025A, WI 250982  
(Authorized Inspector) (Nat'l Board. (incl. Endorsements) State, Prov. And No.)

**CONSTRUCTION CERTIFICATION**

I, Wayne S. Dworak, certify that to the best of my knowledge and belief the statements in this report are correct and that all material, construction and workmanship on this Alteration conform to the National Board Inspection Code.

National Board "R" Certificate of Authorization No. R-5595 expires on 6/8/06  
11/21/03 Custom Fabricating & Repair, Inc. Signed Wayne Dworak  
Date (name of alteration organization) (authorized representative)

**CERTIFICATE OF INSPECTION**

I, R. Jamie Wertjes, holding a valid Commission issued by the National Board of Boiler and Pressure Vessel Inspectors and certificate of competency issued by the jurisdiction of WI. and employed by HSB CT of Hartford, CT. have inspected the work described in this report on 7/25/03 and state that to the best of my knowledge and belief this work complies with the applicable requirements of the National Board Inspection Code. By signing this certificate, neither the undersigned nor my employer makes any warranty expressed or implied, concerning the work described in this report. Furthermore, neither the undersigned nor my employer shall be liable in any manner for any personal injury, property damage or loss of any kind arising from or connected with this inspection.

Date: 1/5/04 Signed: R. Jamie Wertjes Commissions NB 12025A, WI 250982  
(Authorized Inspector) (Nat'l Board. (incl. Endorsements) State, Prov. And No.)