

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

1. Manufactured and certified by PFAUDLER, INC., 1000 WEST AVENUE, ROCHESTER, NEW YORK 14611  
(Name and address of Manufacturer)

2. Manufactured for Jones Hamilton, , Newark, CA  
(Name and address of Purchaser)

3. Location of Installation Jones Hamilton, , Newark, CA  
(Name and address)

4. Type: Vertical Jacketed Vessel, RA60-1000 J002939 NA R951183 sh.1 rev. C 48156 1995  
(Horiz., vert., or sphere) (Tank separator, jkt. vessel, heat exh., etc.) (Mfg's serial No.) (CRN) (Drawing No.) (Natl. Bd. No.) (Year built)

5. ASME Code, Section VIII, Div. 1 Edition 1992, Addenda 1993 See note 2 NA  
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.): 6' 4"

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	66" OD	6' 4"	SA-516 Gr 70	3/8"	0"	1	None	70%	1,2	None	65%	NA	NA

7. Heads: (a) None (b) SA-516 Gr 70  
(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)	None	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	None	NA
(b)	Bottom	1/2"	0"	66"	4"	NA	NA	NA	NA	NA	Yes	S	None	85%

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

8. Type of jacket Fig. 9-2, Type 5 Jacket closure Fig. 9-5(b-2)  
(Describe as ogee & weld, bar, etc.)  
 If bar, give dimensions NA If bolted, describe or sketch.

9. MAWP 90/90w/FV NA psi at max. temp. 650 NA ° F Min. design metal temp. -20 ° F at 90 psi.  
(internal) (external) (internal) (external)

10. Impact test No, exempt from impact testing per UG-20(f).  
(indicate yes or no and the component(s) impact tested)

11. Hydro., ~~burst~~, or ~~burst~~ test press 105 psi Proof test NA

Items 12 and 13 to be completed for tube sections.

12. Tubesheet: Items 12-13 NA  
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: SA-285 Gr C Per 9-9 5' 8"  
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.): 5' 8"

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	60" ID	5' 8"	SA-285 Gr C	3/4"	0"	1	None	70%	1	None	70%	9-9	9-9

15. Heads: (a) SA-285 Gr C Per 9-9 (b) SA-285 Gr C Per 9-9  
(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	3/4"	0"	NA	NA	2:1	NA	NA	NA	Yes	Yes	S	None	85%
(b)	Bottom	3/4"	0"	NA	NA	2:1	NA	NA	NA	Yes	Yes	S	None	85%

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

16. MAWP 100/FV 105 psi at max. temp. 525 650 ° F Min. design metal temp. -20 ° F at 100 psi.  
 (internal) (external) (internal) (external)

17. Impact test No, exempt from impact testing per UG-20(f).  
 (Indicate yes or no and the component(s) impact tested)

18. Hydro., ~~XXXX~~, or ~~XXXX~~ test pressure 100 psi Proof test NA

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	
Agitator	1	30"	CLAMP	SA-836	SA-836	9/16"	0"	None	Note 1	Integral	NA
Inlet	1	10"	LAPJT	SA-836	SA-181 CI 60	7/16"	0"	None	Note 1	Loose	NA
Inlet	4	4"	LAPJT	SA-836	SA-181 CI 60	3/8"	0"	None	Note 1	Loose	NA
Outlet	1	4"	FFWN	SA-836	SA-836	3/8"	0"	None	Note 1	NA	NA
Jkt. Conn.	4	2"	SCDCPLG	SA-216 Gr WCA	SA-105	300#	0"	None	UW-16.1c	NA	NA
Jkt. Conn.	1	3"	SCDCPLG	SA-216 Gr WCA	SA-105	300#	0"	None	UW-16.1c	NA	NA
Jkt. Conn.	2	1/2"	SCDCPLG	SA-105	None	3000#	0"	None	UW-16.1c	NA	NA

20. Supports: Skirt NO Lugs 0 Legs 8 Others NA Attached Welded to jacket head  
 (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)  
 NA

22. Remarks: Inner vessel hydrottested in the vertical position. Pressure relief per UG-125 to be provided by user. Jacket for non-corrosive service. Note 1: Category B weld to swaged opening (e=0.7). Note 2; Code cases 2119-1, 2062-1, 1970-2.  
Mfg's serial No.: J002939. Customer Order No.: 18865.

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. 408 Expires December 31, 19 97  
 Date 27 Dec. 1995 Name PFAUDLER, INC. Signed [Signature]  
 (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 the State or Province of NY and employed by Hartford Steam Boiler Inspection and Insurance Company of Hartford, Connecticut have inspected the pressure vessel described in this Manufacturer's Data Report on 12/27, 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 12/27/95 Signed Russell B. Miller Commissions N.B.# 6653A  
 (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 PFAUDLER, INC. 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 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.)

**FORM U-1 MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS**  
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(Name and address of Manufacturer)

2. Manufactured for Jones Hamilton, , Newark, CA  
(Name and address of Purchaser)

3. Location of Installation Jones Hamilton, , Newark, CA  
(Name and address)

4. Type: Vertical Jacketed Vessel, RA60-1000 J002939 NA R951183 sh.1 rev. C 48156 1995  
(Horiz., vert., or sphere) (Tank separator, jkt. vessel, heat exh., etc.) (Mfg's serial No.) (CRN) (Drawing No.) (Natl. Bd. No.) (Year built)

5. ASME Code, Section VIII, Div. 1 Edition 1992, Addenda 1993 See note 2 NA  
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.): 6' 4"

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	66" OD	6' 4"	SA-516 Gr 70	3/8"	0"	1	None	70%	1,2	None	65%	NA	NA

7. Heads: (a) None (b) SA-516 Gr 70  
(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)	None	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	None	NA
(b)	Bottom	1/2"	0"	66"	4"	NA	NA	NA	NA	NA	Yes	S	None	85%

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

8. Type of jacket Fig. 9-2, Type 5 Jacket closure Fig. 9-5(b-2)  
(Describe as ogee & weld, bar, etc.)  
 If bar, give dimensions NA If bolted, describe or sketch.

9. MAWP 90/90w/FV NA psi at max. temp. 650 NA ° F Min. design metal temp. -20 ° F at 90 psi.  
(internal) (external) (internal) (external)

10. Impact test No, exempt from impact testing per UG-20(f).  
(indicate yes or no and the component(s) impact tested)

11. Hydro., ~~burst~~, or ~~burst~~ test press 105 psi Proof test NA

Items 12 and 13 to be completed for tube sections.

12. Tubesheet: Items 12-13 NA  
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: SA-285 Gr C Per 9-9 SA-285 Gr C Per 9-9  
Mat'l Spec. No., Grade or Type O. D., in. Nom. thk., in. or gauge Number Type (Straight or U)

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1	60" ID	5' 8"	SA-285 Gr C	3/4"	0"	1	None	70%	1	None	70%	9-9	9-9

15. Heads: (a) SA-285 Gr C Per 9-9 (b) SA-285 Gr C Per 9-9  
(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	3/4"	0"	NA	NA	2:1	NA	NA	NA	Yes	Yes	S	None	85%
(b)	Bottom	3/4"	0"	NA	NA	2:1	NA	NA	NA	Yes	Yes	S	None	85%

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

16. MAWP 100/FV 105 psi at max. temp. 525 650 ° F Min. design metal temp. -20 ° F at 100 psi.  
 (internal) (external) (internal) (external)

17. Impact test No, exempt from impact testing per UG-20(f).  
 (Indicate yes or no and the component(s) impact tested) NA

18. Hydro., ~~###~~, or ~~####~~ test pressure 100 psi Proof test NA

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	
Agitator	1	30"	CLAMP	SA-836	SA-836	9/16"	0"	None	Note 1	Integral	NA
Inlet	1	10"	LAPJT	SA-836	SA-181 CI 60	7/16"	0"	None	Note 1	Loose	NA
Inlet	4	4"	LAPJT	SA-836	SA-181 CI 60	3/8"	0"	None	Note 1	NA	NA
Outlet	1	4"	FFWN	SA-836	SA-836	3/8"	0"	None	UW-16.1c	NA	NA
Jkt. Conn.	4	2"	SCDCPLG	SA-216 Gr WCA	SA-105	300#	0"	None	UW-16.1c	NA	NA
Jkt. Conn.	1	3"	SCDCPLG	SA-216 Gr WCA	SA-105	300#	0"	None	UW-16.1c	NA	NA
Jkt. Conn.	2	1/2"	SCDCPLG	SA-105	None	3000#	0"	None	UW-16.1c	NA	NA

20. Supports: Skirt NO Lugs 0 Legs 8 Others NA Attached Welded to jacket head  
 (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)  
NA

22. Remarks: Inner vessel hydrotested in the vertical position. Pressure relief per UG-125 to be provided by user. Jacket for non-corrosive service. Note 1: Category B weld to swaged opening (e=0.7). Note 2; Code cases 2119-1, 2062-1, 1970-2.  
 Mfg's serial No.: J002939. Customer Order No.: 18865.

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. 408 Expires December 31, 19 97  
 Date 27 Dec. 1995 Name PFAUDLER, INC. Signed [Signature]  
 (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 the State or Province of NY and employed by Hartford Steam Boiler Inspection and Insurance Company of Hartford, Connecticut have inspected

the pressure vessel described in this Manufacturer's Data Report on 12/27, 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 12/27/95 Signed Russ H B Miller Commissions N.B.# 6653A  
 (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 PFAUDLER, INC. 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 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.)