

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

KC108-5000-90-125

1. Manufactured and certified by PFAUDLER, INC., 1000 WEST AVENUE, ROCHESTER, NEW YORK 14611

Manufactured for John Brown, 440 Route 22 East, POBox 6884, Bridgewater, NJ 088076884

3. Location of Installation AgrEvo USA, 1740 Whitehall Road, North Muskegon, MI 49445

4. Type: Vertical Jacketed Vessel, KC108-5000 J009818 NA R961286 Sht.1 Rev D 48672 1997  
(Horiz., vert., or sphere) (Tank separator, jkt. vessel, heat exch., etc.) (Mfg's serial No.) (CRN) (Drawing No.) (Natl. Bd. No.) (Year built)

5. ASME Code, Section VIII, Div. 1 Edition 1995, Addenda 1995 2043-2 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.): 9' 9-3/8"

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	114-1/2" ID	9' 9-3/8"	SA-516 Gr 70		3/4"	1/16"	1	None	70%	1, 2	None	65%	NA	NA

(a) NA NA										(b) SA-516 Gr 70 NA				
(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) NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
(b) Bottom		.938"	1/16"	108"	7"	NA	NA	NA	NA	Yes	Yes	S	None	85%

If removable, bolts used (describe other fastening) NA

8. Type of jacket FIG. 9-2, Type 5 Jacket closure (Mat'l Spec. No., Grade, Size, No.) FIG. 9-5, (b-2)  
If bar, give dimensions NA (Describe as ogee & weld, bar, etc.) If bolted, describe or sketch.

9. WP 125/125 w/FV 15 psi at max. temp. 400 NA °F Min. design metal temp. -20 °F at 125 psi  
(internal) (external)

10. Impact test No, exempt from impact testing per UG-20(f).

11. Hydro., pneu., or other test press 140 psi Proof test NA  
(Indicate yes or no and the component(s) impact tested)

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)

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

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.): 8' 11"

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	108" ID	8' 11"	SA-285 Gr C		1-1/8"	1/16"	1	None	70%	1	None	70%	27-6	27-6

(a) SA-285 Gr C Per Appendix 27-6										(b) SA-285 Gr C Per Appendix 27-6				
(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		1.187"	0"	NA	NA	2:1	NA	NA	NA	Yes	Yes	S	None	85%
(b) Bottom		1.187"	1/16"	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 90/FV 140 psi at max temp. 400 400 ° F Min. design metal temp. 10 ° F at 90 psi.  
(internal) (external) (internal) (external)

17. Impact test No, exempt from impact testing per UCS-66(a).

18. Hydro., #11111, or #11111 test pressure 90 psi (Indicate yes or no and the component(s) impact tested)

19. Nozzles, inspection, and safety valve openings: Proof test NA

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/Cvr	1	24"	CLAMP	SA-836	SA-836	7/8"	0"	NA	Note 1	Integral	NA
Inlet	4	8"	LAPJT	SA-836	SA-181 CI 60	23/32"	0"	NA	Note 1	Loose	NA
Inlet/Outlet	3	6"	LAPJT	SA-836	SA-181 CI 60	23/32"	0"	NA	Note 1	Loose	NA
Inlet	3	4"	LAPJT	SA-836	SA-181 CI 60	21/32"	0"	NA	Note 1	Loose	NA
Jkt Conn	1	4"	LAPJT	SA-216 Gr WCA	SA-105	CL.150	0"	NA	UW-16.1c	Loose	NA
Jkt Conn	5	3"	LAPJT	SA-216 Gr WCA	SA-105	CL.150	0"	NA	UW-16.1c	Loose	NA
Jkt Conn	2	2"	NPT	SA-216 Gr WCA	NA	3000#	0"	NA	UW-16.1c	NA	Head/Shell

20. Supports: Skirt No Lugs 4 Legs 0 Others NA Attached Welded to jacket shell  
(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: Constructed in Conformance With Appendix 27, Alternative Requirements For Glass-Lined Vessels.  
Note 1: Category B weld to swaged opening, E=70%. Inner vessel hydrotested in the vertical position.  
Pressure relief per UG-125 to be provided and installed by the customer.  
See Form U-4. Customer order no. JB-94156-11.01. Pfaudler serial no. J009818.

#### 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 2/14/97 Name PFAUDLER, INC. Signed Thomas B. Maier  
(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 2/14, 19 97, 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 2/14/97 Signed Bruce Thompson Commissions N.B.# 10496 A  
(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 the State or Province of and employed by 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.)