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 ALLOY FAB, INC., 200 RYAN ST., SO. PLAINFIELD, N.J. 07080
(Name and address of Manufacturer)

2. Manufactured for ROHM & HAAS COMPANY, PHILADELPHIA, PA. 19105
(Name and address of Purchaser)

3. Location of installation ROHM & HAAS BAYPORT, INC., LA PORTE, TX. 77571
(Name and address)

4. Type: VERTICAL (Horiz., vert., or sphere) | JACKETED DILUTION TANK (Tank, separator, jkt vessel, heat exh., etc.) | 3626-2 (Mfg's serial No.)

-- (CRN) | D-2368-C (Drawing No.) | 2383 (Nat'l. Bd. No.) | 1995 (Year built)

5. ASME Code, Section VIII, Div. 1 | 1992 - 93 (Edition and Addenda (date)) | -- (Code Case No.) | NONE (Special Service per UG 120(d))

APPENDIX EE HALF PIPE JACKET

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): (24) TURNS @ 4 9/16" (b) Overall length (ft & in.): 9'-6"

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
2	1.75"R	298'-6"	SA240304	.109"	0	--	--	--	--	--	--	--	--
1	1.75"R	119'-5"	SA240304	.109"	0	--	--	--	--	--	--	--	--

7. Materials (a) SA240TP304 (b) --
HALF PIPE (Mat'l Spec. No., Grade or Type) H.T. -- Time & Temp.

	Location (Top, Bottom, Ends)	Thickness Min.	Thickness Corr.	Radius Crown	Radius Knuckle	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure Convex	Side to Pressure Concave	Category A Type	Category A Full, Spot, None	Category A Eff.
(a)	BTM HD	.120	0	1.75"R	--	--	--	--	--	--	--	--	--	--
(b)														

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

8. Type of jacket 3" FULL HALF PIPE JKT. FIG. EE-4 Jacket closure PIPE, WELDED (Describe as ogee & weld, bar, etc.)

If bar, give dimensions -- If bolted, describe or sketch.

9. MAWP 100 (internal) -- (external) psi at max. temp. 400 (internal) -- (external) °F Min. design metal temp. -20 °F at 100 psi.

10. Impact test JKT. EXEMPT FROM IMPACT TEST PER UHA-51 (a)
(Indicate yes or no and the component(s) impact tested)

11. Hydro. test press. 175 Proof test UG-101 (a)

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.): 10'-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	114" OD	9'-9"	SA240304L	.3125	0	1	SPOT	85	1	SPOT	85	--	--

15. Heads: (a) SA240304L (b) --
(Mat'l Spec. No., Grade or Type) H.T. -- Time & Temp.

	Location (Top, Bottom, Ends)	Thickness Min.	Thickness Corr.	Radius Crown	Radius Knuckle	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure Convex	Side to Pressure Concave	Category A Type	Category A Full, Spot, None	Category A Eff.
(a)	TOP & BTM	.250"	.063"	108"	7.25"	--	--	--	--	--	CONCAVE	--	--	--
(b)														

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

FORM U-1 (Back)

16. MAWP 15 (internal) -- (external) psi at max. temp. 400 (internal) 400 (external) °F. Min. design metal temp. -20 °F at 15 psi.

17. Impact test VESSEL EXEMPT FROM IMPACT TEST PER UHA-51 (a)
(Indicate yes or no and the component(s) impact tested)

18. Hydro., ~~pneu., combin.~~ test press. 41 Proof test --

19. Nozzles, inspection, and safety valve openings: SAFETY VALVE ELSEWHERE IN SYSTEM FIGURES UW 16.1 2-4

Purpose (Inlet, Outlet, Drain, etc.)	No.	Diameter or Size	Flange Type	Material: Nozzle	Material: Flange	Nozzle Thickness: Nom	Nozzle Thickness: Corr	Reinforcement Material	How Attached: Nozzle	How Attached: Flange	Location (Insp. Open.)
MANWAY	1	24"-15#	RING	*(3)	*(4)	.375	.063	--	TYPE d	TYPE 10	TOP HEAD
SPARE	1	3"-150#	PAD	*(3)	--	1.1875	.063	--	TYPE d	--	--
T. I.	1	1"-150#	PAD	*(3)	--	1.1875	.063	--	TYPE d	--	--
PROCESS	3	3"-150#	L.J.	*(5)	*(6)	SCH 40	.063	--	TYPE d	TYPE 1	--
VENT	1	4"-150#	L.J.	*(5)	*(6)	SCH 40	.063	--	TYPE d	TYPE 1	--
PROCESS	3	2"-150#	L.J.	*(5)	*(6)	SCH 80	.063	--	TYPE d	TYPE 1	--
JKT IN/OUT	6	2"-150#	L.J.	*(7)	*(6)	SCH 40	--	--	TYPE d	TYPE 1	--

20. Supports: Skirt YES (Yes or no) Lugs -- (No.) Legs 6 (No.) Others -- (Describe) Attached SKIRT, WELDED (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)
TOP & BOTTOM HEADS, ENERFAB, INC. SERIAL #(TOP) 9483082, BOTTOM #9483081

22. Remarks: VESSEL TO BE USED AS A 5000 GAL. DILUTION TANK IN A CHEMICAL PROCESS
P.O. #P015-25023, ITEM # 410-01-40300
** NO NONDESTRUCTIVE EXAMINATIONS WERE PERFORMED ON CAT. C & D WELDS
*(3) SA240304L, *(4) SA51670, *(5) SA312TP304L, *(6) SA105, *(7) SA312TP304

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. 7130 Expires JANUARY 31 , 19 96

Date 8-11-95 Name ALLOY FAB, INC. (Manufacturer) Signed (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 NEW JERSEY and employed by COMMERCIAL UNION INSURANCE COMPANY of BOSTON, MASSACHUSETTS have inspected the pressure vessel described in this Manufacturer's Data Report on AUG. 11 , 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 AUG. 11, 1995 Signed (Authorized Inspector) Commissions NB 5078 NJ 134 (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 _____ (Assembler) Signed _____ (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 _____ (Authorized Inspector) Commissions _____ (Nat'l Board incl. endorsement, State, Province and No.)

FORM U-4 MANUFACTURER'S DATA REPORT SUPPLEMENTARY SHEET
As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

1. Manufactured and certified by ALLOY FAB, INC., 200 RYAN ST., SO. PLAINFIELD, N.J. 07080
(Name and address of Manufacturer)

2. Manufactured for ROHM & HAAS COMPANY, PHILADELPHIA, PA. 19105
(Name and address of Purchaser)

3. Location of installation ROHM & HAAS BAYPORT, INC., LA PORTE, TX. 77571
(Name and address)

4. Type: VERTICAL (Horiz., vert., or sphere) | JACKETED DILUTION TANK (Tank, separator, heat exh., etc.) | 3626-2 (Mfg's serial No.)

-- (CRN) | D-2368-C (Drawing No.) | 2383 (Nat'l. Bd. No.) | 1995 (Year built)

Data Report Item Number	Remarks
	NOZZLES CONTINUED
N2 BLANKET (1)	1"-150#, L.J., SA312TP304L, SA105, SCH 80, .063", --, TYPE d, TYPE 1, --

Certificate of Authorization: Type U No. 7130 Expires JANUARY 31, 19 96

Date 8-11-95 Name ALLOY FAB, INC. (Manufacturer) Signed (Representative)

Date Aug. 11, 1995 Name (Authorized Inspector) Commission NB6014 NJ 734 (Nat'l Board (incl. endorsement), State, Province and No.)

3/4

FORM U-2A MANUFACTURER'S PARTIAL DATA REPORT (ALTERNATIVE FORM)
A Part of a Pressure Vessel Fabricated by One Manufacturer for Another Manufacturer
As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

NB# 2383

1. Manufactured and certified by Enerfab, Inc. 4955 Spring Grove Avenue Cincinnati, Ohio 45232
(Name and address of Manufacturer)

2. Manufactured for G O Carlson, Inc. 1 Ledgewood Road Flanders, NJ 07836
(Name and address of Purchaser)

3. Location of installation Unknown
(Name and address)

4. Type: ASME Flanged & Dished Head | 9483081 | --
(Description of vessel part (shell, two-piece head, tube bundle)) | (Mfg's serial No.) | (CRN)

-- | 948308 | Enerfab, Inc. | 1994
(Nat'l. Bd. No.) | (Drawing No.) | (Drawing prepared by) | (Year built)

5. ASME Code, Section VIII, Div. 1 1992 Edition Dec. 1993 Addenda -- | ---
Edition and Addenda (date) | Code Case No. | Special Service per UG-120(d)

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

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
-													--
-													--
-													--

7. Heads: (a) SA240 304L -- (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 Min.	Thickness Corr.	Radius Crown	Radius Knuckle	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure Convex	Side to Pressure Concave	Category A Type	Category A Full, Spot, None	Category A Eff.
(a)	Unknown	.31"	Unk	108.'	7.25"							1	Full	--
(b)														

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

8. MAWP -- (internal) -- (external) psi at max. temp. -- (internal) -- (external) °F Min. design metal temp. -- °F at -- psi.

9. Impact test ---
(Indicate yes or no and the component(s) impact tested)

10. Hydro., pneu., or comb. test press. --- Proof test ---

11. Nozzles, inspection, and safety valve openings:

Purpose (Inlet, Outlet, Drain, etc.)	No.	Diameter or Size	Flange Type	Material Nozzle	Material Flange	Nozzle Thickness Nom.	Nozzle Thickness Corr.	Reinforcement Material	How Attached Nozzle	How Attached Flange	Location (Insp. Open.)

---											

12. Supports: Skirt --- (Yes or No) Lugs -- (No.), Legs -- (No.) Others --- (Describe) Attached --- (Where and How)

13. Remarks No design function performed by Enerfab, Inc. 7. 114."OD
"Adhesive nameplate used batch #2236 applied 08-21-94.

CERTIFICATE OF SHOP/FIELD COMPLIANCE

We certify that the statements made in this report are correct and that all details of material, construction, and workmanship of this pressure vessel part conform to the ASME Code for Pressure Vessels, Section VIII, Division 1.

U Certificate of Authorization No. 2631 Expires December 31, 19 94

Date 10-13-94 Name Enerfab, Inc. (Manufacturer) Signed [signature] (Representative)

CERTIFICATE OF SHOP/FIELD 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 Ohio and employed by Hartford Steam Boiler Inspection & Insurance Co. of Hartford, CT have inspected the pressure vessel part described in this Manufacturer's Data Report on 10-13, 19 94, and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel part 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 part 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 10-13-94 Signed [signature] (Authorized Inspector) Commissions Ohio [illegible] (Nat'l Board incl. endorsement, State, Province and No.)

FORM U-2A MANUFACTURER'S PARTIAL DATA REPORT (ALTERNATIVE FORM)
A Part of a Pressure Vessel Fabricated by One Manufacturer for Another Manufacturer
As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

NB # 2383

1. Manufactured and certified by Enerfab, Inc. 4955 Spring Grove Avenue Cincinnati, Ohio 45232
(Name and address of Manufacturer)

2. Manufactured for G O Carlson, Inc. 1 Ledgewood Road Flanders, NJ 07836
(Name and address of Purchaser)

3. Location of installation Unknown
(Name and address)

4. Type: ASME Flanged & Dished Head | 9483082 | --
(Description of vessel part (shell, two-piece head, tube bundle)) | (Mfg's serial No.) | (CRN)

-- | 948308 | Enerfab, Inc. | 1994
(Nat'l. Bd. No.) | (Drawing No.) | (Drawing prepared by) | (Year built)

5. ASME Code, Section VIII, Div. 1 1992 Edition Dec. 1993 Addenda -- | ---
Edition and Addenda (date) | Code Case No. | Special Service per UG-120(d)

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

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
-													--
-													--
-													--

7. Heads: (a) SA240 304L -- (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 Min.	Thickness Corr.	Radius Crown	Radius Knuckle	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure Convex	Side to Pressure Concave	Category A Type	Category A Full, Spot, None	Category A Eff.
(a)	Unknown	.32"	Unk	108."	7.25"							1	Full	--
(b)														

If removable, bolts used (describe other fastening) ---

8. MAWP -- (internal) -- (external) psi at max. temp. -- (internal) -- (external) °F Min. design metal temp. -- °F at -- psi.
(Mat'l Spec. No., Grade, Size, No.)

9. Impact test ---
(Indicate yes or no and the component(s) impact tested)

10. Hydro., pneu., or comb. test press. --- Proof test ---

11. Nozzles, inspection, and safety valve openings:

Purpose (Inlet, Outlet, Drain, etc.)	No.	Diameter or Size	Flange Type	Material Nozzle	Material Flange	Nozzle Thickness Nom.	Nozzle Thickness Corr.	Reinforcement Material	How Attached Nozzle	How Attached Flange	Location (Insp. Open.)

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12. Supports: Skirt --- (Yes or No) Lugs -- (No.) Legs -- (No.) Others --- (Describe) Attached --- (Where and How)

13. Remarks No design function performed by Enerfab, Inc. 7. 114."OD
"Adhesive nameplate used batch #2236 applied 08-21-94.

CERTIFICATE OF SHOP/FIELD COMPLIANCE

We certify that the statements made in this report are correct and that all details of material, construction, and workmanship of this pressure vessel part conform to the ASME Code for Pressure Vessels, Section VIII, Division 1.

U Certificate of Authorization No. 2631 Expires December 31, 19 94

Date 10-13-94 Name Enerfab, Inc. Signed Don Cox
(Manufacturer) (Representative)

CERTIFICATE OF SHOP/FIELD 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 Ohio and employed by Hartford Steam Boiler Inspection & Insurance Co. of Hartford, CT have inspected the pressure vessel part described in this Manufacturer's Data Report on 10-13, 19 94, and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel part 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 part 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 10-13-94 Signed [signature] Commissions OH(0) commiss.
(Authorized Inspector) (Nat'l Board incl. endorsement, State, Province and No.)