

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 PAUL MUELLER COMPANY 1600 W. PHELPS SPRINGFIELD, MO 65802
(Name and address of manufacturer)
2. Manufactured for FLUOR DANIEL DELTA DIVISION 100 FLUOR DANIEL DRIVE GREENVILLE SC 29607-2762
(Name and address of purchaser)
3. Location of installation UNKNOWN
(Name and address)
4. Type VERTICAL P38961- 15 NA PC07205D REV F 20993 1992
(Mount or vert., tank) (Mfg's serial No.) (CRAG) (Drawing) (Net's Bd. No.) (Year built)
5. The chemical and physical properties of all parts meet the requirements of material specifications of the ASME Boiler and Pressure Vessel Code. The design, construction, and workmanship conform to ASME Rules, Section VIII, Division 1 1989
Year
A89 NA NA
(Addenda Mark) (Code Case No.) (Special service per UG-120(d))

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

6. Shell: SA240 304L .136" 0 4'8" 5'10"
(Matl. Spec. No., Grade) (Nom. Thk. (in.)) (Corr. Allow. (in.)) (Diam. I.D. (ft & in.)) (Length (Overall) (ft & in.))
7. Seams: WDB NONE 70 NA
(Long. (Dist., Sngl.)) (R.T. (Spot or Full)) (Eff. (%)) (H.T. Temp. (°F))
-- SEE LINE 10 NONE 1
(Time) (Grth (Dist., Sngl.)) (R.T. (Spot, Partial, or Full)) (No. of Courses)
8. Heads: (a) Matl. SA240 304L (b) Matl. SA240 304L
(Spec. No., Grade) (Spec. No., Grade)

	Location (Top, Bottom, Ends)	Minimum Thickness	Corrosion Allowance	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
(a)	BOTTOM	.141"	0	56.75"	3"					CONCAVE
(b)										

If removable, bolts used (describe other fastenings)

(Matl., Spec. No., Gr., Size, No.)

9. Type of Jacket APPENDIX 9 TYPE 2
10. Jacket Closure FIG. 9-5 (F-1) & G-5 If bar, give dimensions TOP .5" X .812" If bolted, describe or sketch BOTTOM .375" X 1.25"
(Describe as ogee & weld, bar, etc.)
11. MAWP 38 psi at max. temp. 200 °F. Min. design metal temp. 45 °F at 38 psi
Hydro., pneu., or comb. test press. 58 psi

Items 12 and 13 to be completed for tube sections

12. Tubesheets: Stationary Matl. (Spec. No., Gr.) SA240 304L Diam. (in.) (Subject to pressure) 4'8.375" Nom. Thk. (in.) .136" Corr. Allow. (in.) 0 Attach. (Welded, Bolted) Welded
Floating Matl. (Spec. No., Gr.) SA240 304L Diam. (in.) 4'8.375" Nom. Thk. (in.) .136" Corr. Allow. (in.) 0 Attach. Welded

13. Tubes: Matl. (Spec. No., Gr.) SA240 304L O.D. (in.) 4'8.375" Nom. Thk. (in. or Gauge) .136" Number 2 Type (Straight or "U") U

Items 14-17 incl. to be completed for inner chambers of jacketed vessels or channels of heat exchangers

14. Shell: SA240 316L .375" 0 4'8.375" 6'2.5"
(Matl. Spec. No., Grade) (Nom. Thk. (in.)) (Corr. Allow. (in.)) (Diam. I.D. (ft & in.)) (Length (Overall) (ft & in.))
15. Seams: WDB NONE 70 NA
(Long. (Dist., Sngl.)) (R.T. (Spot or Full)) (Eff. (%)) (H.T. Temp. (°F))
-- WDB NONE 2
(Time) (Grth (Dist., Sngl.)) (R.T. (Spot, Partial, or Full)) (No. of Courses)
16. Heads: (a) Matl. SA240 316L (b) Matl. SA240 316L
(Spec. No., Grade) (Spec. No., Grade)

	Location (Top, Bottom, Ends)	Minimum Thickness	Corrosion Allowance	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
(a)	TOP	.196"	0	54.865"	4"					CONVEX/CONCAVE
(b)	BOTTOM	.212"	0	54.865"	4"					CONVEX/CONCAVE

If removable, bolts used (describe other fastenings)

SCREW CAP SA193 GR B8, .625"11 48 EA NUT HEAVY HEX SA194 GR 8, .625"11 48 EA.
(Matl., Spec. No., Gr., Size, No.)

17. MAWP 50 & 15 IN HG psi at max. temp. 200 °F. Min. design metal temp. 45 °F at 50 & 15 IN HG. psi
Hydro., pneu., or comb. test press. 75 psi

Stack # 81745

NB# 20993

Form U-1 (Back)

18. Nozzles, Inspection and Safety Valve Openings: CUSTOMER TO INSTALL SUITABLE PRESSURE RELIEF DEVICES IN LINE.

Purpose (Inlet, Outlet, Drain, etc.)	No.	Dim. or Size	Type	Mat.	Nom. Thk.	Reinforcement Mat.	How Attached	Location
UNKNOWN	5-1	3"-4"	FERRULE	SA312 316L	.184"/.223"	NONE	WELD	TOP HEAD
PLUG CONN	1	.75"	CPLG	SA479 316L	.5"	NONE	WELD	BOTTOM HD
UNKNOWN	3	2"	FERRULE	SA312 316L	.168"	NONE	WELD	TOP HEAD
UNKNOWN	1	1"	PIPE	SA312 316L	SCH 80	NONE	WELD	BOTTOM HD
UNKNOWN	1	6"	FERRULE	SA312 316L	.109"	NONE	WELD	TOP HEAD
SIGHT GLASS	1	6"	CL150PADFLG	SA240 316L	.875"	NONE	WELD	TOP HEAD
INSPECTION	1	12"X24"	MANWAY	SA240 316L	.25"	NONE	WELD	TOP HEAD
GAUGE	1	4"	SPUD	SA479 316L	.75"	NONE	WELD	BOTTOM HD
RTD CONN	1	.718"	ADAPTER	SA479 316L	.312"	NONE	WELD	BOTTOM HD
AGIT MOUNT	1	8"	CL150PADFLG	SA240 316L	1.8975"	NONE	WELD	TOP HEAD

19. Supports: Skirt NO Lugs 4 Legs Other Attached TO PAD WELDED TO SHELL
(Yes or no) (No) (No) (Describe) (Where and how)

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

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. 5594 expires OCT. 27, 19 95
 Date 12-28-92 Co. name PAUL MUELLER COMPANY Signed Paul Shaw
(Manufacturer) (Representative)

CERTIFICATE OF SHOP INSPECTION

Vessel constructed by PAUL MUELLER COMPANY at SPRINGFIELD, MO 65802

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 MISSOURI and employed by COMMERCIAL UNION INSURANCE COMPANY of BOSTON, MA

have inspected the pressure vessel described in this Manufacturer's Data Report on 12/18, 19 92, 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 the 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 12-28-92 Signed E. J. Farnum Commissions NB # 7376 "A"
(Authorized Inspector) (National Board, State, Province and No.)

CERTIFICATE OF FIELD ASSEMBLY COMPLIANCE

We certify that the field assembly construction of all parts of this vessel conforms with the requirements of Section VIII, Division 1 of the ASME Boiler and Pressure Vessel Code.

"U" Certificate of Authorization No. _____ expires _____, 19 ____
 Date _____ Co. name _____ Signed _____
(Assembler that certified and constructed field assembly) (By 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 that, 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) (National Board, State, Province and No.)

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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 PAUL MUELLER COMPANY 1600 W. PHELPS SPRINGFIELD, MO 65802
(Name and address of Manufacturer)

2. Manufactured for FLUOR DANIEL DELTA DIVISION 100 FLUOR DANIEL DRIVE GREENVILLE SC 29607-2762
(Name and address of Purchaser)

3. Location of installation UNKNOWN
(Name and address)

4. Type: VERTICAL TANK P38961-15
(Vessel, vert., or sphere) (Tank, separator, heat exch., etc.) (Mfg's. serial No.)

NA PC07205D REV F 20993 1992
(CRN) (Drawing No.) (Mat'l Id No.) (Year built)

Data Report
Item Number

Remarks

19. Nozzles, inspection, and safety valve openings: CUSTOMER TO INSTALL SUITABLE PRESSURE RELIEF DEVICES IN LINE.

Purpose (Inlet, Outlet, Drain, etc.)	No.	Diameter or Size	Flange Type	Material		Nozzle Thickness		Reinforcement Material	How Attached		Location (Inlet, Outlet, etc.)
				Nozzle	Flange	Nom.	Corr.		Nozzle	Flange	
INLET	1	2"	CL150FLG	SA312	316L	SCH 40		NONE			TOP HEAD
INLET	2-1	2"	CL150FLG	SA312	316L	SCH 40		NONE			SHELL/BOT
OUTLET	1	2"	CL150PADFLG	SA240	316L	.406"		NONE			BOTTOM HD
OUTLET	3	2"	CL150PADFLG	SA312	316L	SCH 40		NONE			SHELL

VESSEL IS AN 850 GALLON PREP KETTLE WITH INTEGRAL STEAM JACKET ON THE SHELL AND BOTTOM HEAD. MANWAY COVER IS NOT INCLUDED IN THE CODE DESIGN OF MANWAY. REMOVABLE TOP HEAD BOLTS AND SEALS AGAINST MATING FLANGE SA182 316L WELDED TO SHELL. PER CUSTOMER REQUEST BOTTOM HEAD TO SHELL AND SHELL RECEIVED SPOT RADIOGRAPHY. BOTTOM AND TOP HEAD WAS FABRICATED FROM ONE PIECE BLANK. IMPACT EXEMPT PER UHA 51. VESSEL WAS HYDROSTATICALLY TESTED IN VERTICAL POSITION.

Certificate of Authorization: Type U No. 5594 Expires OCT. 27 1995

Date 12-28-92 Name PAUL MUELLER COMPANY Signed Paul Lass
(Manufacturer) (Representative)

Date 12-18-92 Name E. J. Raine Commission NB # 7376"A"
(Authorized Inspector) (Natl. Board incl. endorsement, State, Province and No.)

(12/91)

This form (E00118) may be obtained from the ASME Order Dept., 22 Law Drive, Box 2300, Fairfield, NJ 07007-2300

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