100702

NON DISCRETIONARY UNTIL SUPERSEDED

ORIGINATOR: R. BOEDDEKER DATE: 2/8/89
REVISED:

PRESSURE VESSEL DESIGN & INSPECTION SHEET

Name of Vessel: Extraction Columns

Contents: Shellside: Tubeside:

Type of Construction: FUSION WELDED, ASME CODE, STAMPED 1989 NON DISCRETIONARY

Drawing No. : - P&G
- Fabricator Precision Stainless 43899D

Material Specifications:	P&G No.	Plant	Dept.	Eng.Div.No.
Shell Side: SA-240-304L		Sherman		10872-1
		Sherman		10872-2
		Sherman		10872-3
Tube, Jacket		Sherman		10872-4
or Coil Side:		Sherman		10872-5
		Sherman		10872-6

Field Tests & Inspections

Shell	Max. All. Press.	150 PSI	5	Yr. Internal	
	Max. All. Temp.	400 F	1	Yr. External	
Tubes. Jacket, or Coil	Max. All. Press.			Yr. Internal	
	Max. All. Temp.			Yr. External	

NOTE: For all heat exchangers, the Pressure Vessel Group is to be notified in the event of a change from the original operating conditions.

COMMENTS:

REVISION DATE: _____ SIGNATURE: _____ P.V. NO. _____

Eq. No. 22-C-18

FORM U-1A MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS
(Alternative Form for Single Chamber, Completely Shop-Fabricated Vessels Only)
As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

1. Manufactured and certified by Precision Stainless, Inc., 501 N. Belcrest, Springfield, MO 65802 (Name and address of manufacturer)
2. Manufactured for Procter & Gamble, Cincinnati, OH (Name and address of purchaser)
3. Location of installation The Folger Coffee Company, 400 West F. M. 1417, Sherman, TX 75090 (Name and address)
4. Type Vertical (Horiz. or vert., cyl.) | 8985-1 thru 8985-6 (Mfg.'s serial No.) | -- (CRN) | 43899-D (Drawing No.) | 2429 thru 2434 (Nat'l. Bd. No.) | 1989 (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 1986 Edition (Year)
   to Addendum A-87 (Addenda date) | -- (Code Case Nos.) | -- (Special service per U-2 (a) (1) (i))
6. Shell: SA240 304L (Spec. No., Grade) | .25 (Nom. Thk. in.) | 0 (Corr. Allow. in.) | 2'-11-1/2" (Diam. I.D. (ft. & in.)) | 38'-7-15/16" (Length (overall) (ft. & in.))
7. Seams: Welded Single Butt (Long., Welded, Dbl., Sngl., Lap, Butt) | Spot (R.T. (Spot) or Full) | 85 (Eff. (%)) | -- (H.T. Temp. (°F)) | -- (Time (hr)) | Welded Double Butt (Circ. (Welded, Dbl., Sngl., Lap, Butt)) | Spot (R.T. (Spot, Partial, or Full)) | 4 (No. of Courses)
8. Heads: (a) Matl. SA240 304L (Spec. No., Grade) (b) Matl. SA240 304L (Spec. No., Grade)

	Location (as 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	.313	0	--	--	2 : 1	--	--	--	Concave
(b)	Bottom	.250	0	--	--	--	25°	--	--	--

If removable, bolts used (describe other fastenings) (Matl., Spec. No., Gr., Size, No.)

9. MAWP 150 psi at max. temp. 400 °F
   Min. design metal temp. -20 °F at 150 psi. Hydro. ~~pneu.~~ or comb. test pressure 241 psi.
10. Nozzles, inspection and safety valve openings:

Purpose (Inlet, Outlet, Drain)	No.	Diam. or Size	Type	Matl.	Nom. Thk.	Reinforcement Matl.	How Attached	Location
See U-4								

11. Supports: Skirt No (Yes or no) | Lugs 4 (No.) | Legs -- (No.) | Other -- (Describe) | Attached Shell Weld (Where and how)
12. Remarks: Manufacturer's Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report: Customer to install gate valve between transition and both head and supply bolts. (Name of part, item number, Mfg.'s name and identifying name)

Transition shell .250 mm thickness, 3 K. R., SA240 304L. Name plate per Code Case 2051. Support rings 3/8 plate, SA240 304. Customer to install safety valves. Vessel hydrostatically tested in horizontal position at 241 psi. See U-4

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. 11658 expires April 6, 19 92.
Date 6-8-89 Co. name Precision Stainless, Inc. (Manufacturer) Signed Douglas G. Mangum (Representative)

CERTIFICATE OF SHOP INSPECTION

Vessel constructed by Precision Stainless, Inc. at Springfield, MO
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 Texas and employed by Commercial Union Insurance Co. have inspected the component described in this Manufacturer's Data Report on April 14, 19 89, 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 6-8-89 Signed Arthur R. Cooper (Authorized Inspector) Commission NB 8193 Texas, 2445 (Nat'l Board (incl. endorsements), State, Prov., 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 Precision Stainless, Inc., 501 N. Belcrest, Springfield, MO 65802 (Name and address of manufacturer)

2. Manufactured for Procter & Gamble, Cincinnati, OH (Name and address of purchaser)

3. Location of installation The Folger Coffee Company, 400 West F. M. 1417, Sherman, TX 75090 (Name and address)

4. Type Vertical (Horiz., vert., sph., etc.) | 8985-1 thru 8985-6 (Builder's serial no.) | -- (CRN) | 43899-D (Dwg.) | 2429 thru 2434 (Nat'l. Bd. No.) | 1989 (Year built)

Data Report Item Number	Purpose	No.	Dia. or Size	Type	Mat.	Remarks	Nom. Thk.	Reif. Mat.	How Attached	Location
Item #10	Agitator	1	12"	Pipe	SA240	304L	.375	--	Weld	
	Spare	3	3"	Pipe	SA312	304L	Sch 40	--	Weld	
	Trans.	2	3"	Pipe	SA312	304L	Sch 40	--	Weld	
	Lev. switch	1	2"	Pipe	SA312	304L	Sch 40	--	Weld	
	Spare	1	2"	Pipe	SA312	304L	Sch 40	--	Weld	
	Spare	2	1"	Pipe	SA312	304L	Sch 40	--	Weld	
	Inlet	1	8"	Pipe	SA240	304L	Sch 40	SA240 1/4"	Weld	
	Outlet	1	6"	Pipe	SA240	304L	Sch 40	--	Weld	
	Sightglass	2	4"	Pad Flange	SA240	304L	150#	--	Weld	

Date 6-8-89 Co. name Precision Stainless, Inc. (Manufacturer) Signed Douglas W. Morgan (Representative)

Date 6-8-89 Signed Otha A. Cooper (Authorized Inspector) Commissions NB 8293 Tenn. 3445 (Nat. Board (incl. endorsements), State, Prov., and No.)

(12/87) This form (S00118) is available from the Order Dept., ASME, 345 E. 47 St., New York, N.Y. 10017

FORM R-2 REPORT OF ALTERATION

in accordance with provisions of the National Board Inspection Code

1. Work performed by Paul Mueller Company (name of alteration organization) (Form R No.)

1600 W. Phelps, PO Box 828, Springfield, MO 65802 (address)

2. Owner FOLGERS COFFEE COMPANY (name)

300 F.M. HWY 1417 WEST SHERMAN TX 75092 (address)

3. Location of installation SAME AS ABOVE (name)

(address)

4. Unit identification *SEE REMARKS (boiler, pressure vessel) Name of original manufacturer *SEE REMARKS

5. Identifying nos.: *SEE REMARKS (mfg serial no.) *SEE REMARKS (National Board No.) (jurisdiction no.) 235290-7 THRU -12 (other) *SEE REMARKS (year built)

6. NBIC Edition/Addenda: 1998 A98 Original Construction Code: *SEE REMARKS (incl. edition and addenda)

7. Description of work: PAUL MUELLER COMPANY TO REMOVE EXISTING STACEY LINE BLIND ON THE LOWER END OF SIX CONES AND REPLACE EACH WITH A 12" TYPE A-304L S/20 MSS STUB END, 12" A-105 LAP JOINT FLANGE AND A 1" SCH 40 304/304L VANSTONE NOZZLE ASSEMBLY. HYDROSTATICALLY TEST VESSEL AFTER REWORK AT 256 PSI. (use supplemental sheet, Form R-4, if necessary)

Pressure test, if applied 256 psi

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

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

9. Remarks: CUSTOMER REQUESTS ALTERATIONS TO BE MADE UPON SIX CONE ASSEMBLIES, WHICH WERE RECEIVED BY PAUL MUELLER COMPANY, WITHOUT MARKINGS TRACEABLE TO THE ORIGINAL MANUFACTURER OR TO A NATIONAL BOARD NUMBER.

ATIONAL BOARD INSPECTION C DE

Form R-2 (back)

(Form R No.)

DESIGN CERTIFICATION

I, Russell D. Copeland, 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. 2957 expires on OCT, 27 20 01

Date 11/5/99, 19 99 Paul Mueller Company (name of design organization) Signed Russell D. Copeland (authorized representative)

CERTIFICATE OF DESIGN CHANGE REVIEW

I, Frank Hamtak, holding a valid Commission issued by The National Board of Boiler and Pressure Vessel Inspectors and certificate of competency issued by the jurisdiction of Missouri and employed by Commercial Union Ins Co. of Boston Ma 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 11-5, 19 99 Signed Frank Hamtak CU 156 (inspector) Commissions NB# 11474A (National Board (incl. endorsements), and jurisdiction, and no.)

CONSTRUCTION CERTIFICATION

I, Russell D. Copeland, 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 conforms to the National Board Inspection Code.

National Board "R" Certificate of Authorization No. 2957 expires on OCT, 27 20 01

Date 11/5, 19 99 Paul Mueller Company (name of Alteration organization) Signed Russell D. Copeland (authorized representative)

CERTIFICATE OF INSPECTION

I, Frank Hamtak, holding a valid Commission issued by The National Board of Boiler and Pressure Vessel Inspectors and certificate of competency issued by the jurisdiction of Missouri and employed by Commercial Union Ins Co of Boston Ma have inspected the work described in this report on 11-5, 19 99 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 11-5, 19 99 Signed Frank Hamtak CU (inspector) Commissions NB# 11474A (National Board (incl. endorsements), and jurisdiction, and no.)

R29601.1

NON DISCRETIONARY
UNTIL SUPER SEDED