

68816-18

FORM U-1 MANUFACTURERS' DATA REPORT FOR PRESSURE VESSELS

CV-8534

AS required by the provisions of the ASME Code rules, Section VIII Division 1

1.6m² FILTER

Manufactured and certified by GASTON COUNTY DYEING MACHINE CO. - HWY. 27 W. - MT. HOLLY, NC 28120

2. Manufactured for ROSENMUND, INC. - P.O. BOX 668625 - CHARLOTTE, NC 28266-8625

3. Location of installation UNKNOWN

4. TYPE VERT. JKT. TANK F80875A-691-3 E3600661 (H) 22422 1992

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 Code, Section VIII, Division 1: 1990 1989

Items 6-11 inclusive to be completed for jacketed vessels or channels of heat exchangers. HALF PIPE COIL

6. Shell: SA312-304 .120" 0 3.260" 3.232"

7. Seams: WLD SGL BUTT NONE

8. Needs: (a) (b)

Need No.	Need Description	Material	Quantity	Remarks
(a)				
(b)				

If removable, bolts used (describe other fastenings):

9. Type of jacket: HALF PIPE COIL Proof test: N/A

10. Jacket closure: FLANGED E-JO If det. give dimensions: N/A If bolted, describe or sketch:

11. MAWP: FULL VACUUM / 139 psi at max. temp. 350 °F Min. design metal temp. -20 °F at FV/139 psi.

Items 12 and 13 to be completed for tube sections

12. Tubenests:

13. Tubes:

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

14. Shell: SA240-316L 5/16" 0 4' 10 3/8" 2' 11/16"

15. Seams: WLD DBL BUTT NONE 70% N/A WLD DBL BUTT NONE I

16. Needs: (a) SA240-316L (b) SA240-316L

Need No.	Need Description	Material	Quantity	Remarks
(a) TOP				
(b) BOTTOM				

If removable, bolts used (describe other fastenings): SA193 - B16 - 1.062" - 26 (RATHMAN CLAMPS) 6 1/2" OD

17. MAWP: FULL VACUUM / 90 psi at max. temp. 350 °F Min. design metal temp. -20 °F at FV/90 psi.

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18. NOZZLES, INSPECTION AND SAFETY VALVE OPENINGS:

Particulars	Quantity	Size or Size	Type	Part	Wt. (Lbs.)	Remarks	How Attached	Location
HANWAY	1	16"	FLANGED	SA240-316L	.750			HEAD
AGITATOR	1	13.189"	PAD	SA240-316L	.625			HEAD
OUTLET	1	9.843"	PAD	SA182-316L	3.000			HEAD
SIGHT PORT	1	4"	PAD	SA240-316L	1.250			SHELL
OUTLET	1	3"	PAD	SA240-316L	2.250			HEAD
IN. OUTLET	3	4"	FLANGED	SA312-316L	.237			SHELL
IN. OUTLET	2	3"	FLANGED	SA312-316L	.216			HD&SHELL
IN. OUTLET	2	3"	FLANGED	SA403-304L	.216			HD&SHELL
OUTLET	3	2"	FLANGED	SA312-316L	.154			JACKET
IN. OUTLET	7	1 1/2"	FLANGED	SA312-316L	.145			HEAD
OUTLET	2	1"	FLANGED	SA312-316L	.140			HEADS
MISC.	5	1"	COUPLING	SA182-316L	3000#			HEAD
THERMOWELL	1	1"	PKG. GLAND	SA479-316L	.562			HD&SHELL
								SHELL

19. Supports: Skirt NO Lugs 0 Legs 3 Other SEE REMARKS Attached WELDED TO SHELL

20. Remarks: Manufacturers' Partial Data Reports properly identified and signed by Commissioned inspectors have been furnished for the following items of the report: ROLLED RING - SER. NO. 59809 - 4 & 7 - SANDMEYER STEEL CO.

DESIGN CONDITIONS FOR BASE JACKET: MAMP FULL VACUUM/139 PSI @ -20 TO 350 DEG. F.
HYDRO TESTED AT 200 PSI. THE FLAT BOTTOM IS STRUCTURALLY BRACED WITH (3) WFBX58LB/F
SA36: BEAMS. ITEM 6: SA240-316 - .120" - 1/2 PIPE RETURN.
THE FOLLOWING IDENTIFICATION IS SCRIBED WITHIN 8" OF THE CODE NAMEPLATE: NB 22422 G.C.

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. 11254 expires 1-31 19 93
 Date 1-25-92 Name GASTON COUNTY DYEING MACH. CO. Signed Bobby Sherton

CERTIFICATE OF SHOP INSPECTION

Vessel constructed by GASTON COUNTY DYEING MACHINE CO. at MT. HOLLY, NC

The undersigned, holding a valid commission issued by The National Board of Boiler and Pressure Vessel Inspectors and the state of province of NORTH CAROLINA and employed by KEMPER NATIONAL INSURANCE CO.

Report on 1-16 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 Manufacturers' 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 1-28-92 Signed R. Williams Commissions NB 10523 B NC 1187

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 _____ Name _____ Signed _____

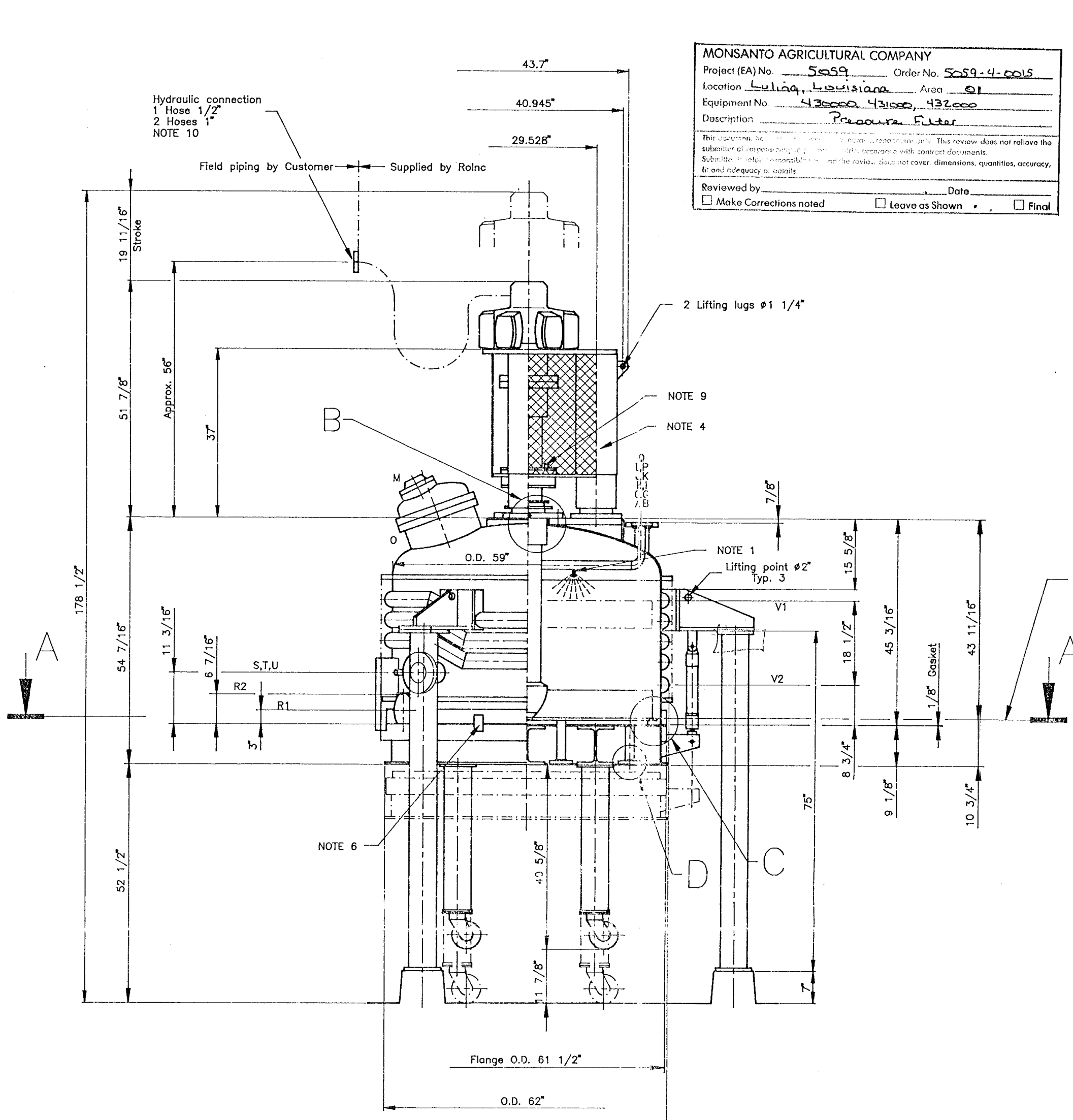
CERTIFICATE OF FIELD ASSEMBLY INSPECTION

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 _____

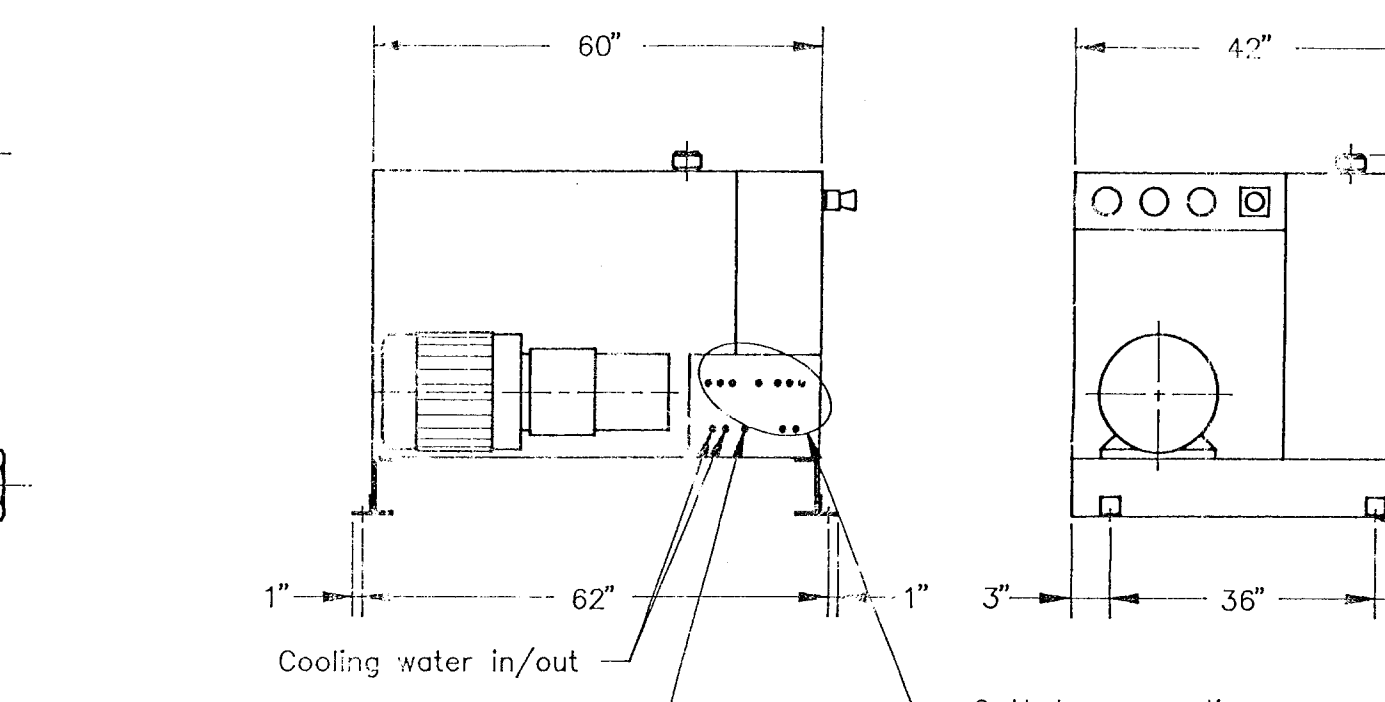
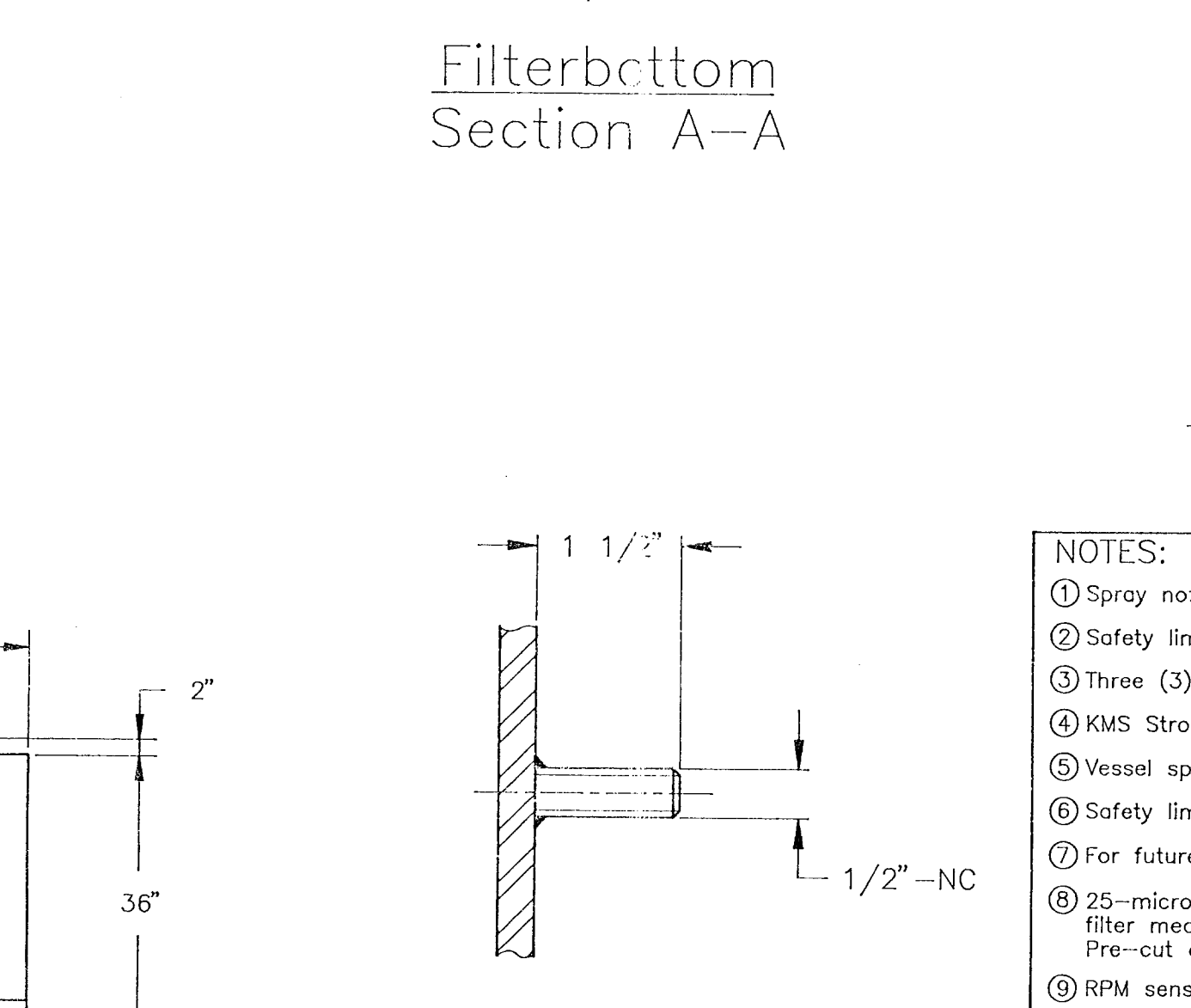
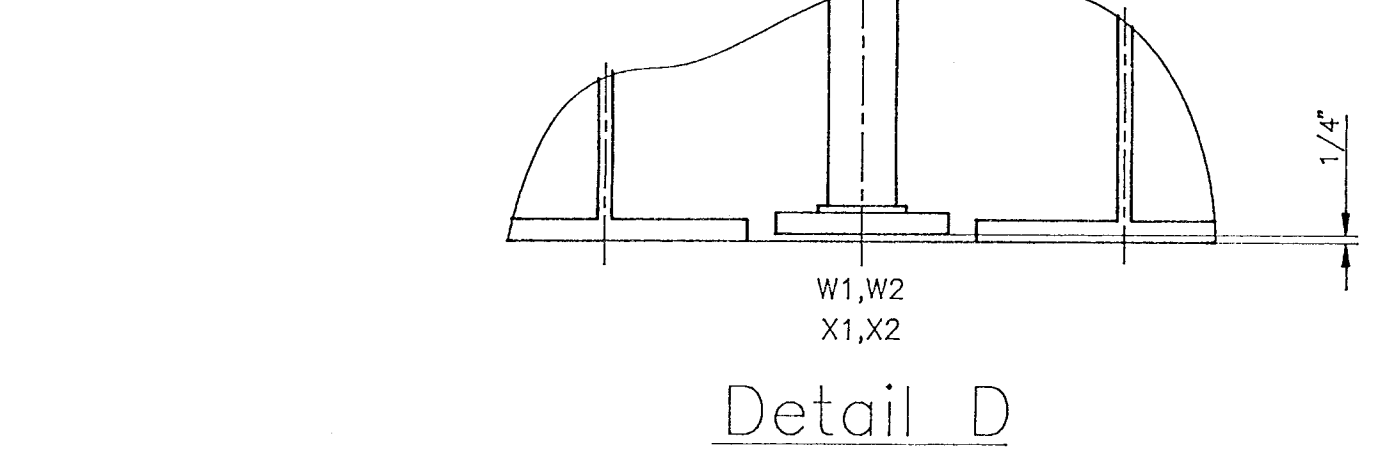
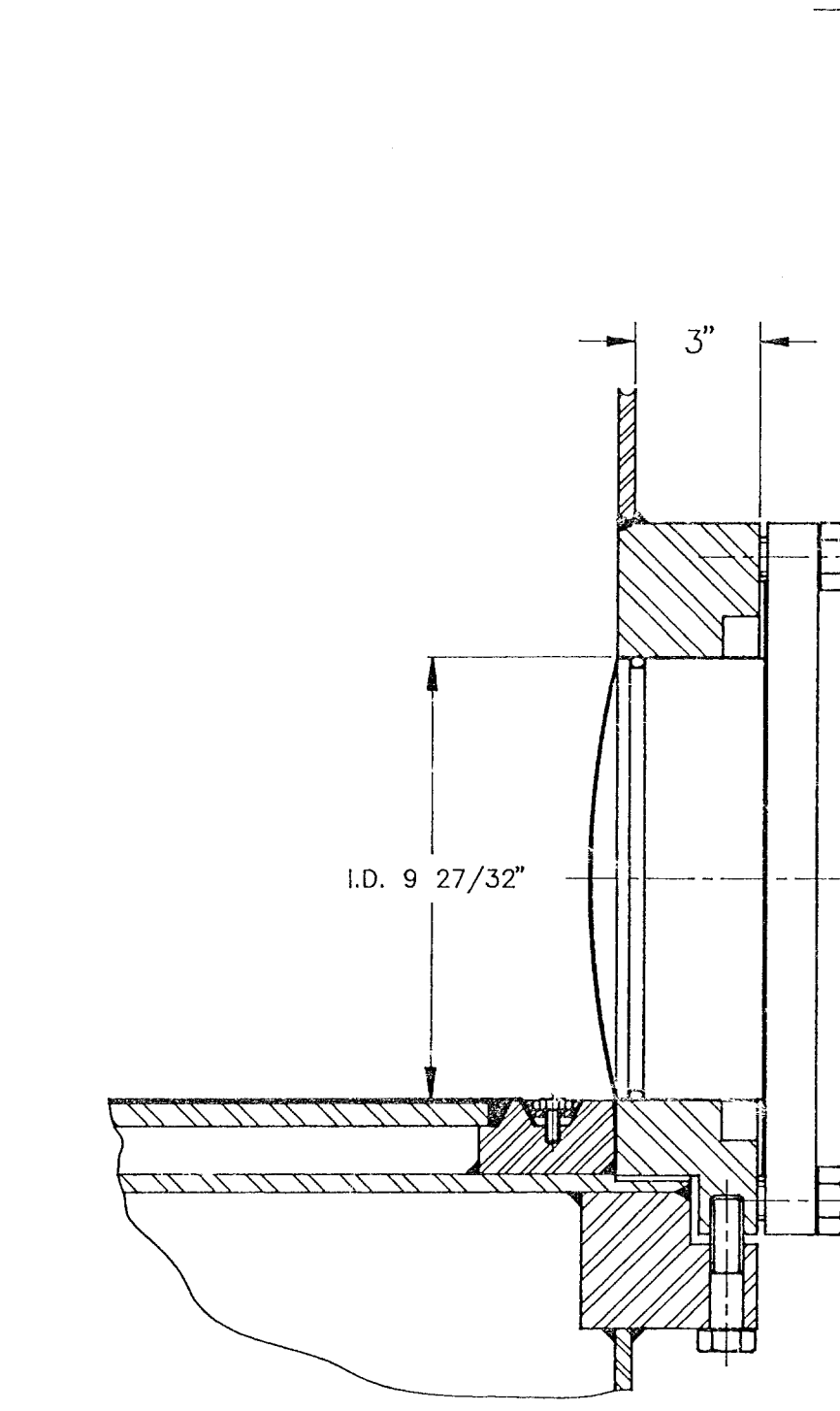
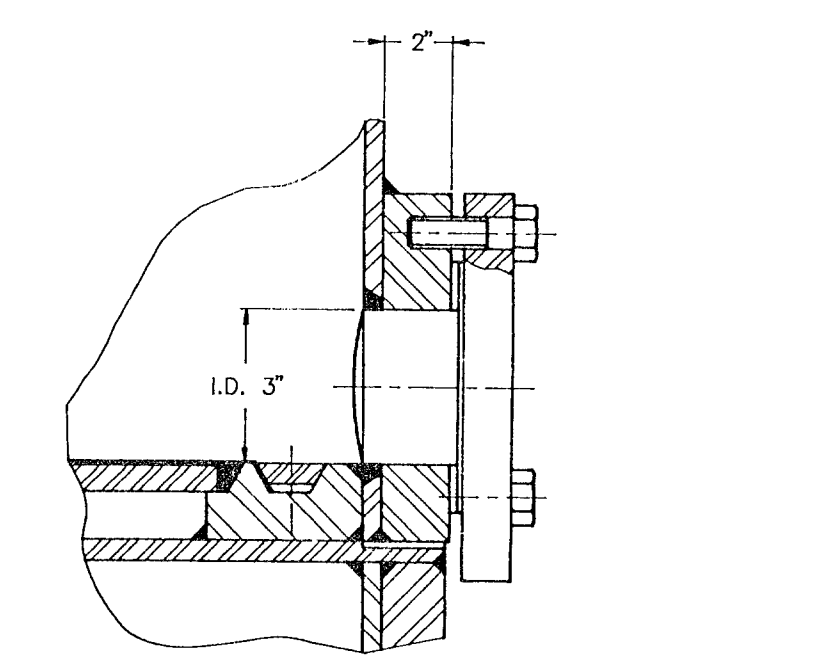
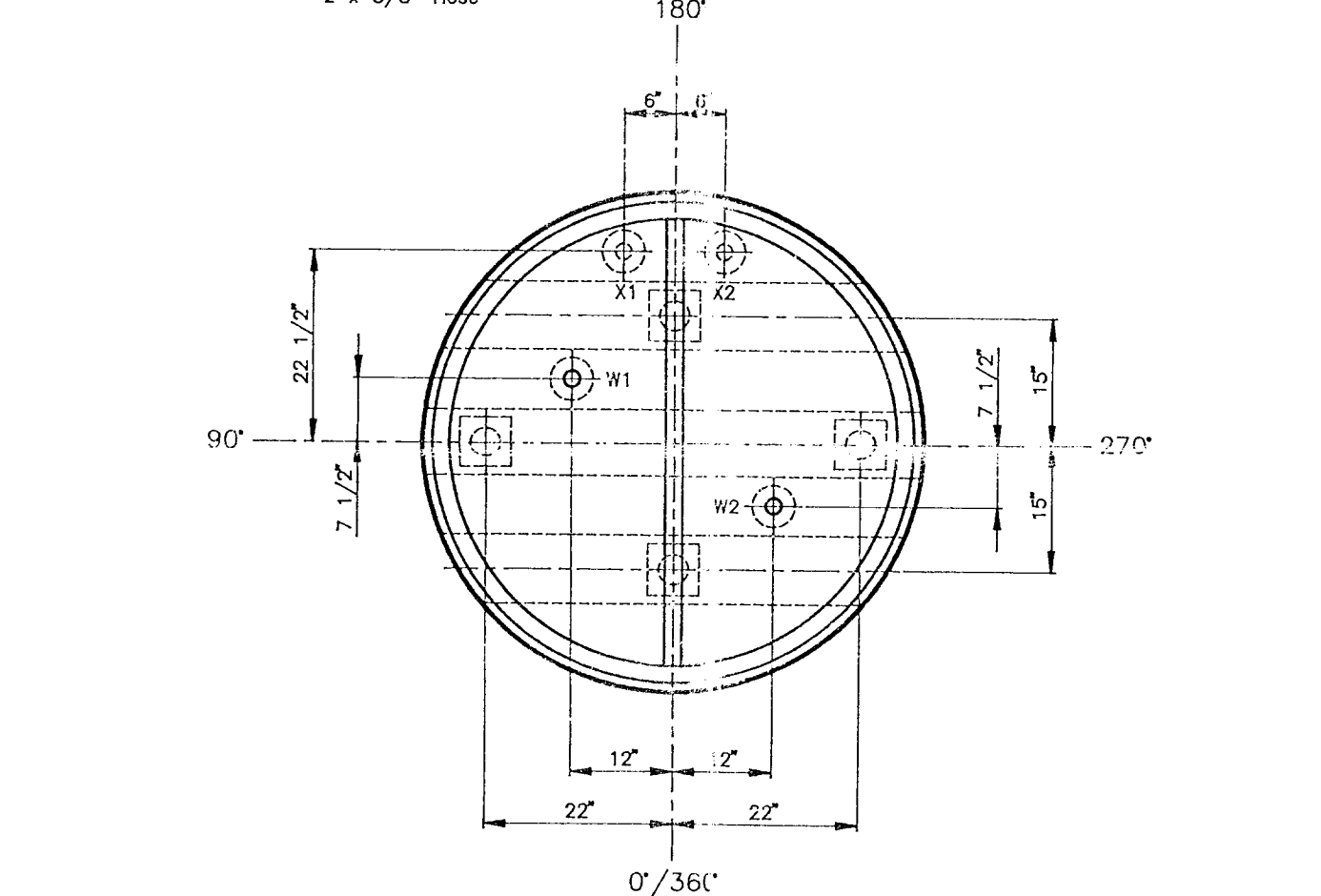
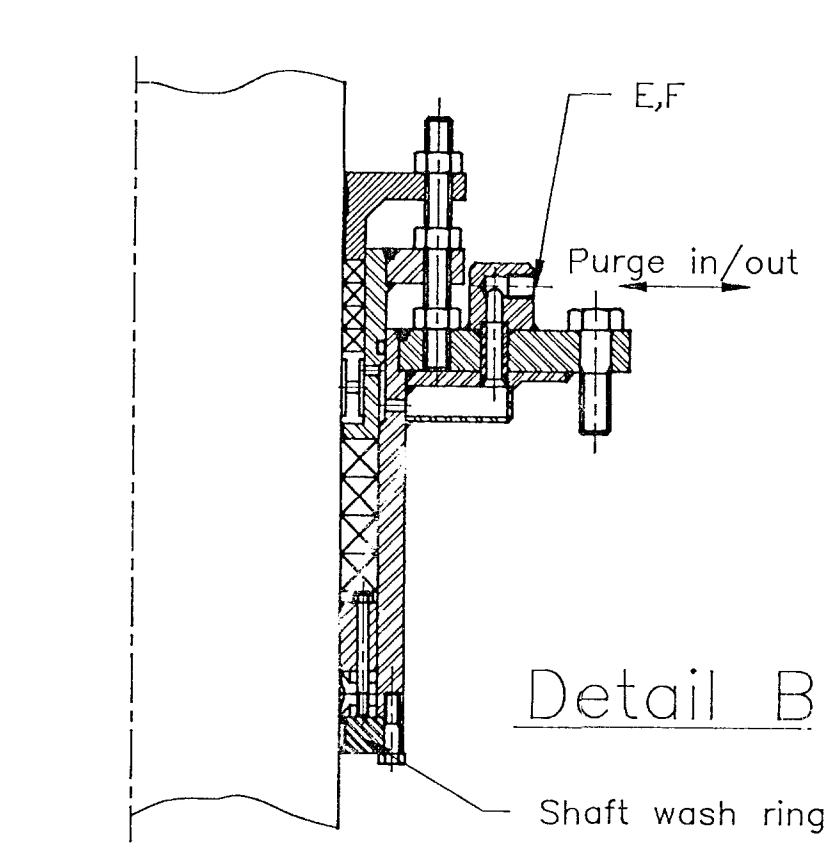
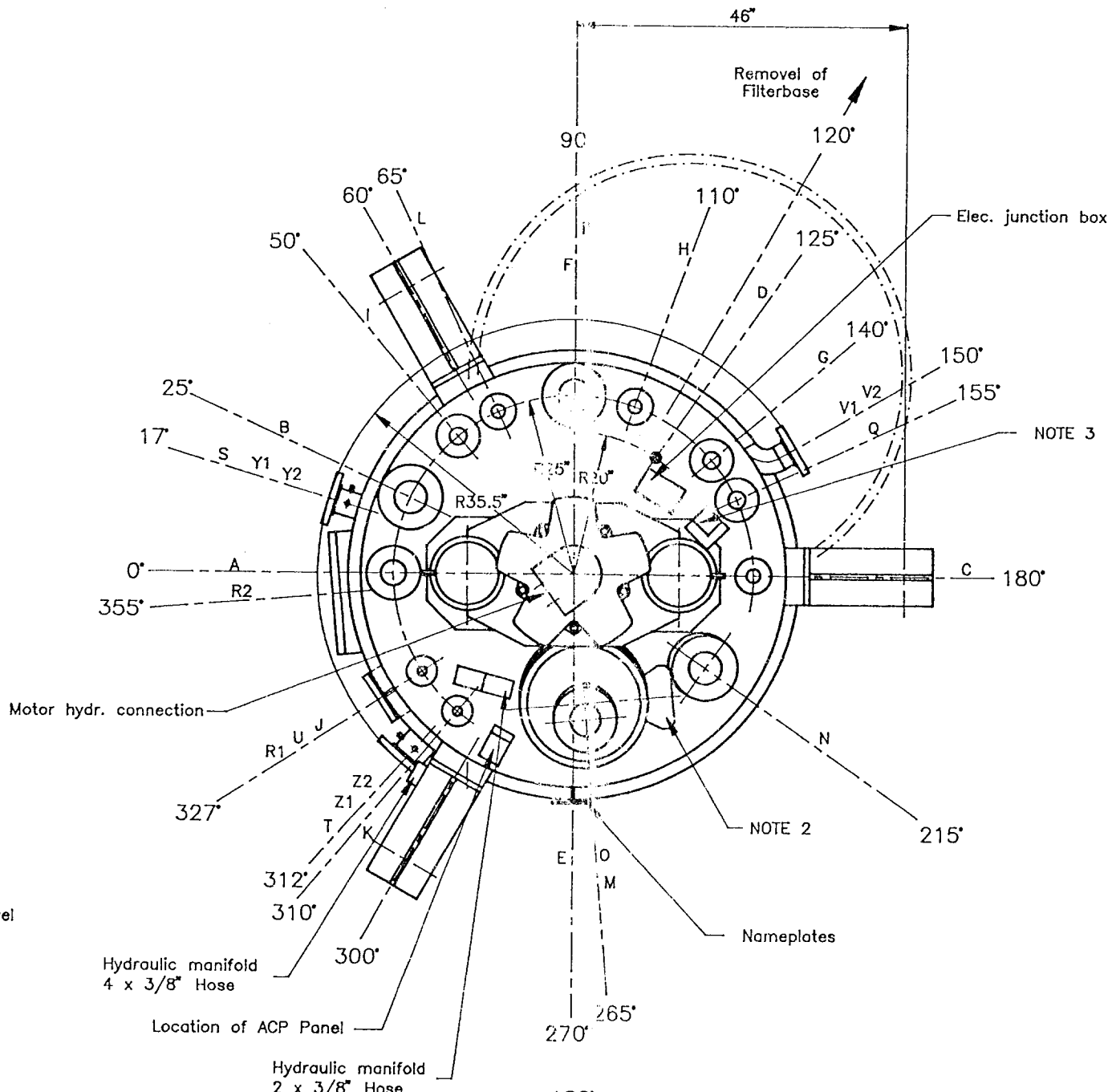
of _____ have compared the statements in this Manufacturers' Data Report with the described pressure vessel and state that parts referred to as data items _____ not included in the certificate of shop inspection, have been inspected by me and that to the best of my knowledge and belief, the manufacturer 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 the Manufacturers' 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 _____



MONSANTO AGRICULTURAL COMPANY
 Project (FA) No. 5559 Order No. 5059-4-6015
 Location: Chattanooga, Tennessee Area: SI
 Equipment No. 43300-41000-43300
 Description: Pressure Filter
 Reviewed by: _____ Date: _____
 Make Corrections noted Leave as Shown Final



Main power pack
 See separate detail drawing D3707

Nozzle Schedule			
DESCRIPTION	SIZE	RATING	TYPE
A	Spare with blind flange	3"	150# RFSO
B	Spare	4"	150# RFSO
C	Spraying	1 1/2"	150# RFSO
D	Spray wash-ring	1 1/2"	3000# Cpl.
E	Spare purge	1/2"	NPT
F	Spare vent	1/2"	NPT
G	Manway	2"	150# RFSO
H	Controlled venting	1 1/2"	150# RFSO
I	Pressure tap	2"	150# RFSO
J	High level (Head)	2"	150# RFSO
K	High level (Head)	1"	150# RFSO
L	Spare with blind flange	1 1/2"	150# RFSO
M	Sight glass	4"	150# Pod.
N	Sight glass	4"	150# Pod.
O	Manway	16"	90# Flng
P	Spare with blind flange	4"	150# RFSO
Q	Vent	2"	150# RFSO
R1	Slurry outlet with blind flange	3"	150# Pod.
R2	Solids discharge with blind flange	10"	90# Pod.
S	Level (Side)	3"	150# RFSO
T	Spare with blind flange	4"	150# RFSO
U	Thermowell (Side)	1 1/2"	NPT
V1, V2	Outlet in/out	3"	150# RFSO
W1, W2	Filtrate outlet	1 1/2"	150# RFSO
X1, X2	Base heating in/out	1 1/2"	150# RFSO
Y1, Y2	Purge connection	1/2"	NPT
Z1, Z2	Purge connection	1 1/2"	NPT

PROCESS DATA					
Filter surface area	m ²	1.6	HEAT TRANSFER AREA		
Max. working volume	Gal	390	Agitator	ft ²	N/A
Max. cake volume	Gal	140	Sidewall	ft ²	15
			Filterbase	ft ²	16

SERVICES REQUIRED	
Air connection:	Instrument air 60 psig (One required)
Nitrogen:	60-90 psig
Cooling water:	Flow rate 1-2 Gpm 40-60 psig (One in-and one outlet)

DISCHARGE VALVE		MATERIALS	
Type:	N/A	Main body:	
Valve model:		Slide plate:	
Bore:		Spindle:	
Drawing number:		Seats:	
Design pressure:		Seals:	
Design temperature:		Solenoid valve:	
Flange:		Sensor:	
Actuator:			

VESSEL SPECIFICATION				MATERIALS	
Design pressure	Psig	N/A	N/A	Main body:	
Design temperature	°F			Jacket:	
Test pressure	Psig			Body flange:	

DRIVE UNIT SPECIFICATION					
Drive size:	1.6m2 F1 Drive stool	Max. Torque on Agitator:	5,760 Nm		
Driver by:	Hydraulic motor (Rexroth)	Motor Coating:	No		
Gearbox:	N/A	Internal parts made of:	316L SS		
Drive type:	Straight drive	External parts made of:	Carbon steel		
Stroke:	300mm	External bolting:	CS Galvanized		
Agitator:	3-arm "S" blade	Main shaft with lantern ring:	Yes		
Design conditions:	90 psig at 350°C	Discharge tube with lantern ring:	N/A		
Shaft diameter:	150mm	Finish internal:	Mill		
HP motor:	N/A	Paint on Carbon steel:	Monsanto spec.		
Speed of Agitator:	Variable				

MOTOR INFORMATION					
TYPE	HP	RPM	VOLTS	HERTZ	SPECIFICATION
Main drive motor:					N/A
Auger drive motor:					N/A
Main power pack motor:	15	1800	460	60	Cl.1 Div.1 Croup C+D
Auxiliary pack motor:					N/A

VESSEL SPECIFICATION				
Design pressure max/min	psig	90/FV	139/FV	139/FV
Design temperature min/max	°F	-20/+350	-20/+350	-20/+350
Test pressure	psig	Per code	Per code	Per code
ASME Code stamped		Yes	Yes	Yes

CORROSION ALLOWANCE				MATERIALS	
Corrosion allowance:	None	Shell:		316L SS	
Flange:	ANSI	Dished head:		316L SS	
Radigraphy:	Spot	Flat head:		316L SS	
Seismic zone:	Zone 1	Jacket:		304L SS	
Internal finish:	Mill	Skirt:		304L SS	
External finish:	Monsanto spec.	Internals:		316L SS	
Paint on CS comp:	Monsanto spec.	Body flange:		304/316L	
		Internal bolting:		Monel/316L SS	
Manway cover:	Spring assist	External bolting:		C-Clamps galvanized	
Wash system:	Spray assist	Manway O-Ring:		Teflon encap. Viton	
		Gasket:		Gylon/Crane 1065 packing	

Weight of filter, full	14,000 LBS.	Weight of filter, empty	11,000 LBS.
Customer P.O. No.	5059-4-0015	Customer Ref. No.	432.000
Rosenmund Inc. Job No.	91-RF-180	Filter Serial No.	RSD1.6-650-91

Client:			
ROSENMUND INC. 2969 INTERSTATE STREET / P.O. BOX 668625 CHEMICAL PROCESS EQUIPMENT CHARLOTTE, NC 28266-8625			
For 1.6m2 Side Discharge Filter	Scale	Drawn	5/06/91
	None	Checked	V.Furrer
	DWG. NO.		REV.
	91-RF-180-3		F

- NOTES:
- Spray nozzle type: Spraying Systems #3/4-1H71-WSQ
 - Safety limit switch type: Square D 9007CR53F
 - Three (3) limit switches type: Square D 9007CR53B2
 - KMS Stroke sensor 4 - 20 mA
 - Vessel spec. see Rosenmund Inc. spec ES15175 and Monsanto spec.
 - Safety limit switch type: Square D 9007CR53D
 - For future solids discharge use with Rosenmund side discharge valve
 - 25-micron absolute, 316L SS sintered 5-layer filter media. One layer is the filter media layer, the other four are for mechanical support and drainage. Pre-cut and shaped for installation.
 - RPM sensor P+F proximity 4 - 20 mA output signal
 - Final location to be advised by Monsanto

No.	REVISION	Date	Appr.
F	Increased size of main power pack	12/18/91	V.Furrer
E	Added nozzle Z1+Z2 and changed jacket pressure	11/04/91	V.Furrer
D	Changed stroke and added nozzle Y1+Y2	10/17/91	V.Furrer
C	Changed filterbase height and power pack design	8/13/91	V.Furrer
B	Certified drawings	7/17/91	V.Furrer
A	New nozzle layout and misc. customer changes	6/21/91	V.Furrer
No.	REVISION	Date	Appr.

CERTIFIED PRINT

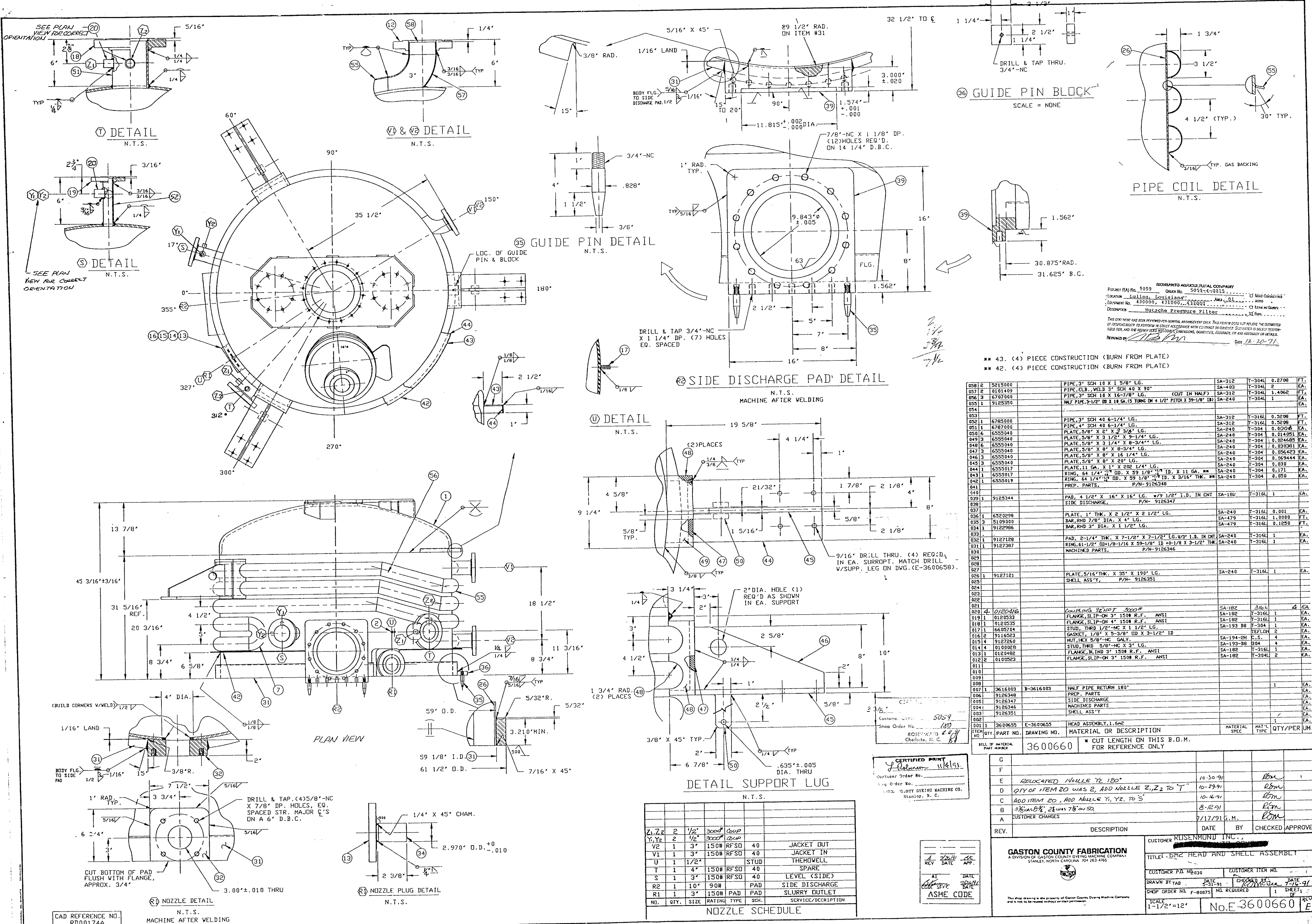
Customer Order No. _____
 Shop Order No. _____

ROSENMUND
 Charlotte, N.C.

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FILE NO. \FILTER\SIDED\FIN\91RF1803

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36 GUIDE PIN BLOCK
SCALE = NONE

PIPE COIL DETAIL
N.T.S.

35 GUIDE PIN DETAIL
N.T.S.

38 SIDE DISCHARGE PAD DETAIL
N.T.S.
MACHINE AFTER WELDING

40 DETAIL
N.T.S.

DETAIL SUPPORT LUG
N.T.S.

32 NOZZLE DETAIL
N.T.S.
MACHINE AFTER WELDING

33 NOZZLE PLUG DETAIL
N.T.S.

43. (4) PIECE CONSTRUCTION (BURN FROM PLATE)
42. (4) PIECE CONSTRUCTION (BURN FROM PLATE)

ITEM NO.	DESCRIPTION	QTY	UNIT	SA-312	T-304L	0.2700	FT.
058 2	PIPE, 3" SCH 10 X 1 5/8" LG.	2	EA.				
057 2	PIPE, CLS., WELD 3" SCH 40 X 90"	2	EA.				
056 3	PIPE, 3" SCH 10 X 16-7/8" LG. (CUT IN HALF)	3	EA.				
055 1	WFL PIPE, 1/2" ID X 1 1/2" O.D. X 18" LG. (5 TURN IN 4 1/2" FITTING 59-1/8" ID)	1	EA.				
054							
052 1	PIPE, 3" SCH 40 6-1/4" LG.	1	EA.				
051 1	PIPE, 4" SCH 40 6-1/4" LG.	1	EA.				
050 6	PLATE, 5/8" X 2" X 3/8" LG.	6	EA.				
049 3	PLATE, 5/8" X 3 1/2" X 9-1/4" LG.	3	EA.				
048 6	PLATE, 5/8" X 3 1/4" X 8-3/4" LG.	6	EA.				
047 3	PLATE, 5/8" X 8" X 8-3/4" LG.	3	EA.				
046 3	PLATE, 5/8" X 8" X 16 1/4" LG.	3	EA.				
045 3	PLATE, 5/8" X 8" X 20" LG.	3	EA.				
044 1	PLATE, 1 1/2" GA. X 11" X 22 1/4" LG.	1	EA.				
043 1	RING, 64 1/4" O.D. X 59 1/8" I.D. X 11 GA.	1	EA.				
042 1	RING, 64 1/4" O.D. X 59 1/8" I.D. X 3/16" THK.	1	EA.				
041							
040	PREP. PARTS, P/N- 9126348						
039 1	PAD, 4 1/2" X 16" X 16" LG. W/9 1/2" I.D. IN CNT.	1	EA.				
038	SIDE DISCHARGE, P/N- 9126347						
037							
036 1	PLATE, 1" THK X 2 1/2" X 2 1/2" LG.	1	EA.				
035 3	BAR, RND 7/8" DIA. X 4" LG.	3	EA.				
034 1	BAR, RND 3" DIA. X 1 1/2" LG.	1	EA.				
033							
032 1	PAD, 2-1/4" THK. X 7-1/2" X 2-1/2" LG. W/1 1/8" I.D. IN CNT.	1	EA.				
031 1	RING, 61-1/2" O.D. X 19-1/16" I.D. X 59-1/8" I.D. X 3-1/2" THK.	1	EA.				
030	MACHINED PARTS, P/N- 9126346						
029							
028							
027							
026 1	PLATE, 5/16" THK. X 35" X 19" LG.	1	EA.				
025	SHELL ASS'Y, P/N- 9126351						
024							
023							
022							
021							
020 4	Couplings 1/2" 3000"	4	EA.				
019 11	0120533						
018 11	0120535						
017 11	0605704						
016 12	0116523						
015 4	0127250						
014 4	0100229						
013 11	0124492						
012 2	0100523						
011							
010							
009							
008 1	0616003						
007 1	0126348						
006	0126347						
005	0126346						
004	0126351						
003							
002							
001 1	0600655						

NO.	QTY.	SIZE	RATING	TYPE	SCH.	SERVICE/DESCRIPTION
Z1	2	1/2"	3000"	COUP		
V2	1	3"	150#	RFSO	40	JACKET OUT
V1	1	3"	150#	RFSO	40	JACKET IN
U	1	1/2"				STUD
T	1	4"	150#	RFSO	40	SPARE
S	1	3"	150#	RFSO	40	LEVEL (SIDE)
R2	1	10"	90#	PAD		SIDE DISCHARGE
R1	1	3"	150#	PAD		SLURRY OUTLET
NO.	QTY.	SIZE	RATING	TYPE	SCH.	SERVICE/DESCRIPTION

GASTON COUNTY FABRICATION
A DIVISION OF GASTON COUNTY DYING MACHINE COMPANY
STANLEY, NORTH CAROLINA 28143-4165

CUSTOMER: ROSENMOND INC.
TITLE: 150# HEAD AND SHELL ASSEMBLY
CUSTOMER P.O. NO. 030
CUSTOMER ITEM NO. 1
DRAWN BY TAB DATE 10-29-91
DATE 10-16-91
SHEET 1 OF 1
SCALE: 1-1/2"=12"
REV. 1
DATE 7/17/91
BY G.M.
CHECKED APPROVED

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