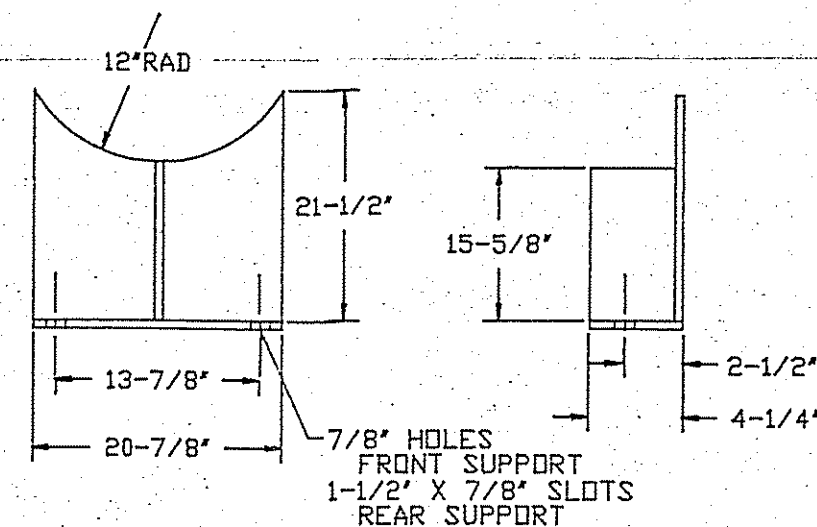
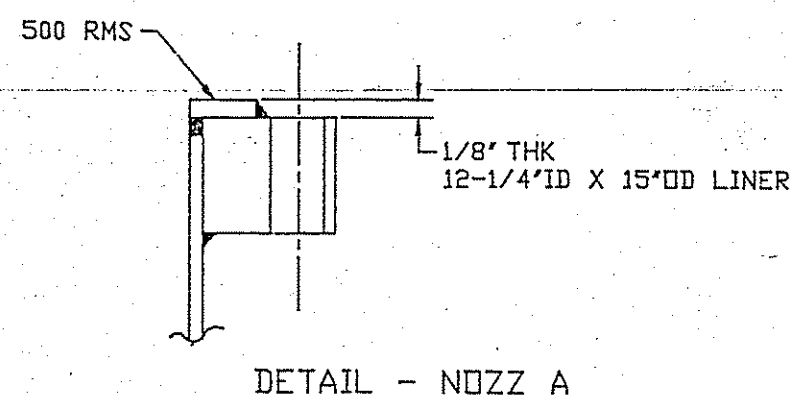
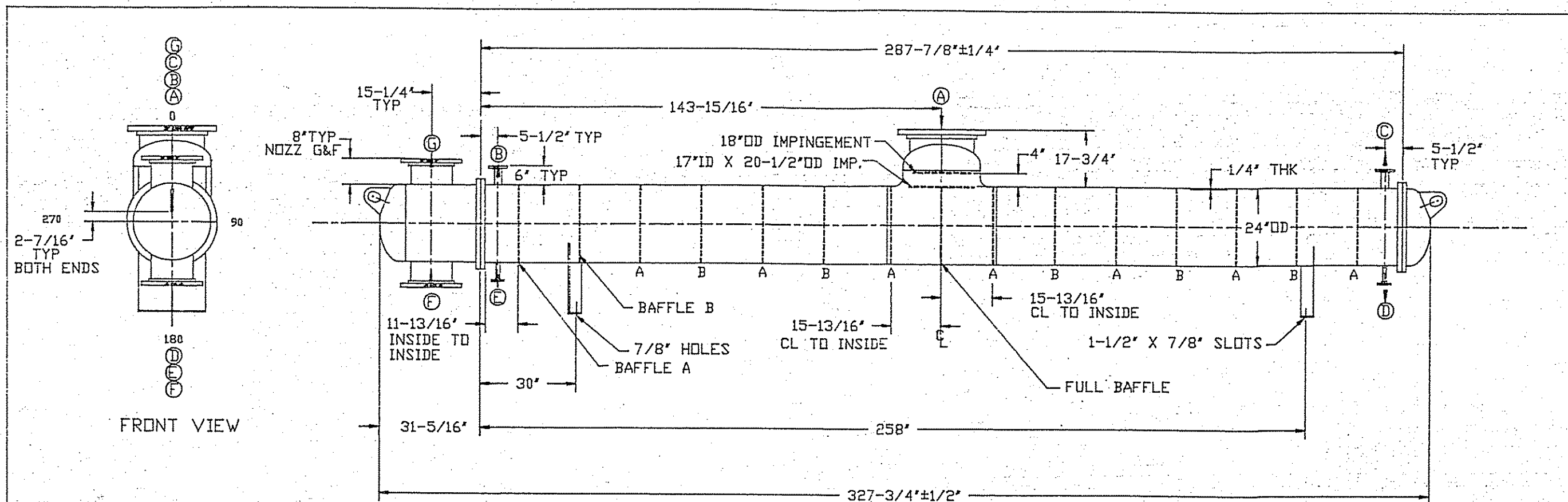




DESIGN CONDITIONS			NOZZLES AND COUPLINGS					
	SHELL	TUBE	A	1	20" RFSD	SCH 10	INLET	
DESIGN PRESS, psig	25/FV	75/FV	B	1	2" RFSD	SCH 10	OUTLET	
DESIGN TEMP, F	250/-20	250/-20	C	1	2" RFSD	SCH 10	OUTLET	
NO. OF PASSES	ONE	TWO	D	1	2" RFSD	SCH 10	OUTLET	
CORR. ALLOW.	0.0	0.0625	E	1	2" RFSD	SCH 10	OUTLET	
STRESS RELIEF	----	----	F	1	12" RFSD	SCH 40s	INLET	
RADIOGRAPH	----	----	G	1	12" RFSD	SCH 40s	OUTLET	
HYDROTEST, psig			* TOLERANCES ±1/8" UNLESS OTHERWISE NOTED					
MATERIALS			* BOLT HOLES TO STRADDLE MAJOR CENTERLINES					
			* BLAST S/S FOR APPEARANCE SHOP PRIME C/S PARTS					
TUBES (436) .049 AVG WALL X 3/4"OD SA-249 TP316L WLD			* BUILD TO ASME & TEMA CLASS C CODE STAMP REQUIRED					
TUBESHEET SA-240 GR 316L PL			* EXPAND TUBES ONLY - NO GROOVES.					
CHANNEL CYL 24" STD (.375) PIPE S-53 GR B WLD			* NOTCH BAFFLES.					
SHELL CYL 24" SCH 10 (.25) PIPE SA-312 TP316L WLD			BAFFLES					
STUDS / NUTS SA-193 B8/ SA-194 2H			QTY:	15				
GASKETS COMP FIBER 1/8" THK			INSIDE TO INSIDE	18-5/8"				
BAFFLES SA-240 GR316L PL			CUT:	41% VERT				
WEIGHT 7242LBS EMPTY - 11875 LBS FOW - 4517 LBS BNDL			INLET SP TO INSIDE BAF	15-13/16"				
			NO.	DATE	BY	DESCRIPTION		

SUPPORT DETAIL

PD #229472
24-288 HORIZONTAL

Drawn By: SAM	Chd By:	Date:
MONTICELLO TANK		
MONTICELLO, INDIANA		
COMPANY: MONSANTO		
LOCATION: LULING, LA		
SERVICE OF UNIT: HEAT EXCHANGER		
Job # T103221	ITEM #:	
Drawing # 3221-1	DATE: 7-25-94	Rev # 00

00095 - 27200

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 MONTICELLO TANK INC. 806 N. FIRST STREET, MONTICELLO, IN. 47960
(Name and address of Manufacturer)

2. Manufactured for MONSANTO CO. P.O. BOX 174, LULING, LA. 70770
(Name and address of Purchaser)

3. Location of Installation MONSANTO CO. HWY. 90, LULING, LA. 70070
(Name and address)

4. Type: HORIZ. HEAT EXCHANGER
(Horiz., vert., or sphere) (Tank, separator, jkt. vessel, heat exh., etc.)

5. ASME Code, Section VIII, Div. 1 1992-A93 Edition and Addenda (date) Code Case No. 3221 5569 1994
(Mfg's serial No.) (CRN) (Drawing No.) (Nat'l. Bd. No.) (Year built)

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): 3 (b) Overall length (ft & in.): 23'-11 7/8"

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
2	24 OD	10'-5 3/8"	SA-312-316L		.25	0	EW	NONE	1	3	NONE	1	N/A	
1	" " TEE	2'-10"	SA-403-316L		"	"	"	"	"	"	"	"	"	

7. Heads: (a) (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)														
(b)														

(b) (Mat'l Spec. No., Grade or Type) H.T. - Time & Temp

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

8. Type of jacket _____ Jacket closure _____ (Describe as ogee & weld, bar, etc.)

If bar, give dimensions _____ °F Min. design metal temp. -20 °F at 25 ps

9. MAWP 25/PS (Internal) (external) psi at max. temp. 250 (internal) (external) NO

10. Impact test _____ (Indicate yes or no and the component(s) impact tested) NONE

11. Hydro., pneu., or comb. test press. HYDRO 47 PSI Proof test NONE

Items 12 and 13 to be completed for tube sections.

12. Tubesheet: SA-240-316L Stationary (Mat'l Spec. No.) 23.5 Dia., in. (subject to press.) 1.5625 Nom. thk., in. 0 Corr. Allow., in. WELDED Attachment (welded or bolted)

13. Tubes: SA-249-316L Floating (Mat'l Spec. No.) .75 Dia., in. .049 Nom. thk., in. 436 Corr. Allow., in. STRAIGHT Attachment 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.): 2'-7 5/16"-0'-8 9/16"

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	24 OD	1'-11 1/8"	SA-53-B		.375	.0625	EW	NONE	.85	3	NONE	.85	N/A	

15. Heads: (a) SA-516-70 (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)	FRONT	.375	.0625			2:1					YES		N/A	
(b)	REAR	"	"			"					"		"	

(b) SA-516-70 (Mat'l Spec. No., Grade or Type) H.T. - Time & Temp

If removable, bolts used (describe other fastening) (32) 5/8" DIA. STUD BOLTS SA-193-B7 W/SA-194-2H NUTS. (Mat'l Spec. No., Grade, Size, No.)