

ANSI NOZZLE SCHEDULE					
SIZE	RATE	FACE	NOZZLE NECK	SERVICE	
TUBE SIDE					
Z1	3"	150#	RFWN	SCH. 40	INLET
U1	3"	150#	RFWN	SCH. 40	OUTLET
*D1	1"	150#	RFWN	SCH. 40	DRAIN
*D2	1"	150#	RFWN	SCH. 40	DRAIN
*D3	1"	150#	RFWN	SCH. 40	DRAIN
*V1-4	1"	150#	RFWN	SCH. 40	VENT
SHELL SIDE					
Z2	4"	150#	RFWN	SCH. 80	INLET
U2	3"	150#	RFWN	SCH. 40	OUTLET
*V5	2"	150#	RFWN	SCH. 40	VENT
*D4	2"	150#	RFWN	SCH. 40	DRAIN
*K	1"	150#	RFWN	SCH. 40	VENT
*L	1"	150#	RFWN	SCH. 40	DRAIN
*TV1	1/2"	150#	RFWN	SCH. 80	TUBESHEET VENT
*TD1	1/2"	150#	RFWN	SCH. 80	TUBESHEET DRAIN

\*FURNISH WITH STUDS, NUTS, GASKET & BLIND.

WPS P1-P1	W-42(SMAW) W-72(FCAW) W-89(SAW)
WPS P1-P8	W-2(SMAW) W-112(FCAW) W-100(SAW)
WPS P8-P8	W-3(SMAW) W-81(FCAW) W-90(SAW)

ASME CODE REQUIREMENTS		
	SHELL SIDE	TUBE SIDE
DESIGN PRESSURE	PSIG 75/F.V.	75/F.V.
DESIGN TEMPERATURE (MAX/MIN)	F 302/32	302/32
HYDRO. TEST PRESSURE	PSIG 115	115
CORROSION ALLOWANCE	NONE	NONE
POSTWELD HEAT TREATMENT	NONE	NONE
RADIOGRAPHIC EXAMINATION	FULL	FULL
METAL TEMP (TEMA 8TH ED)	302/75/77/79/70/302	302/113/77/113/302/302

ASME CODE STAMP / NAT'L BD. REG IS REQUIRED.

CUSTOMER INSPECTION IS REQUIRED

SPECIFICATIONS: 1986 ASME CODE SECT. VIII DIV. 1 ADDENDA-A87

SPECIAL SERVICE: ▲ CODE CASE: NONE PARTIAL DATA REPORTS: NONE

TEMA (B) G1G; G7B; SG1E; SG1S; SU2A; C111S

TUBES: SA-213 TP 304L PER SW300M TYPE 3 CAT. III-C WALL: AVG.

NO. 88 o.d. 1" BWG. 16 LENGTH: 192" (16'-0")

TUBESHEETS: SA-182 F 304L

▲ LETHAL SERVICE BOTH SIDES

PART	SHELL SIDE	TUBE SIDE
VESSEL	SA-240 TP 304L	SA-240 TP 304L
COVERS		SA-516 GR. 70 LINED WITH SA-240 TP 304L
FORMED HEADS	SA-240 TP 304L	SA-240 TP 304L
BODY FLANGES		SA-182F 304L
NOZZLE FLANGES	SA-182 F 304L	SA-182 F 304L
NOZZLE PIPE	SA-312 TP 304L	SA-312 TP 304L
STUDS/NUTS	SA-193-B8M CL II/SA-194-B8	SA-193-B8M CL II/SA-194-B8
GASKETS	U2A G-82G4	0.175" THK. 304 S.ST'L SPIRAL WOUND GRAPHITE FILLED WITH 1/4" 304 S.ST'L INNER & OUTER GAGE RING
INSULATION	3"	1 1/2"

REVISIONS

MAY 10 1990

3 1/26/90 REV. SUPPORT 298464

2 2/14/89 GEN. REV.

1 10/1/89 GEN. REV.

CERTIFIED ENG. SHELLI

CUSTOMER E.I. DUPONT DE NEMOURS & COMPANY, INC.

CUSTOMER P.O. NO. LPBC-96110W

ITEM NO. PROJ. NO. 6432

PLANT BEAUMONT, TEXAS

EN NO. 5111-7053-15-1&2

TEMA SIZE AND TYPE

(2) 15-192 AEM REACTOR INTERCHANGER

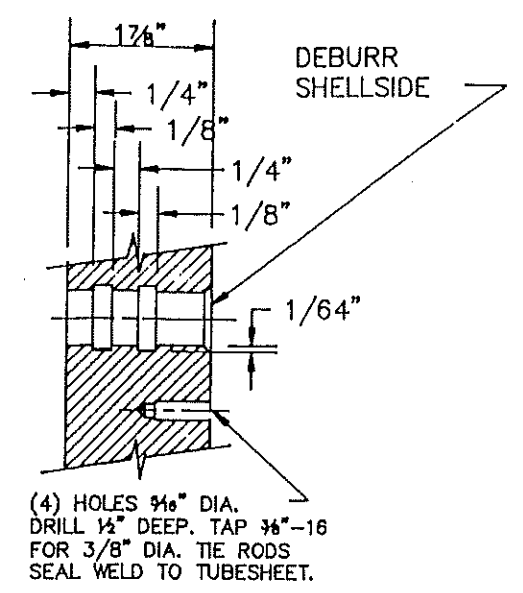
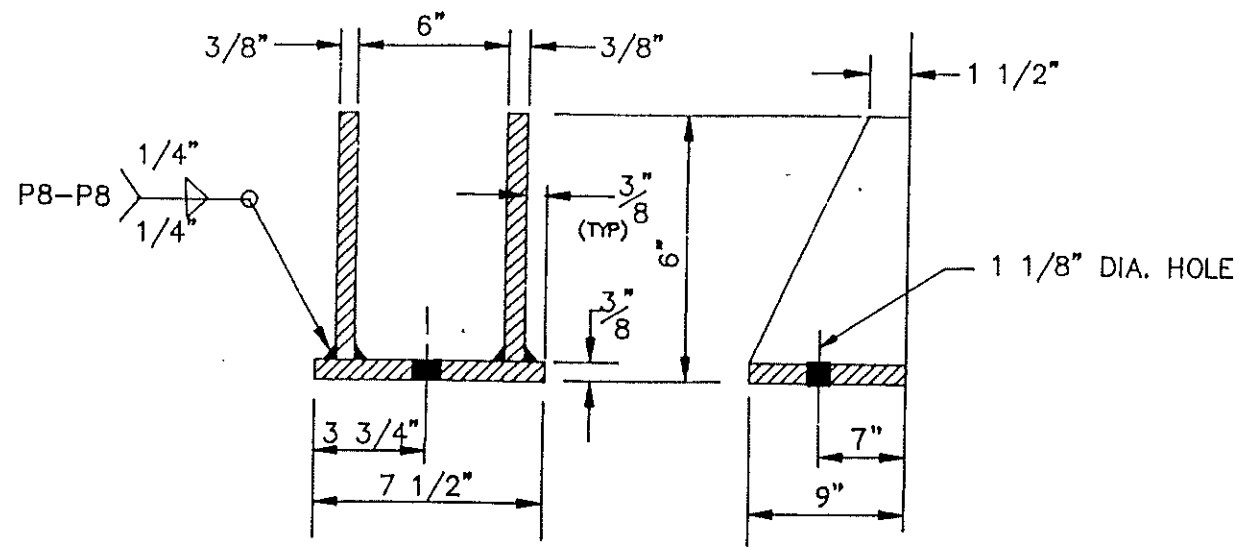
SOUTHERN HEAT EXCHANGER CORP.

P.O. BOX 030008 TUSCALOOSA, AL. 35403

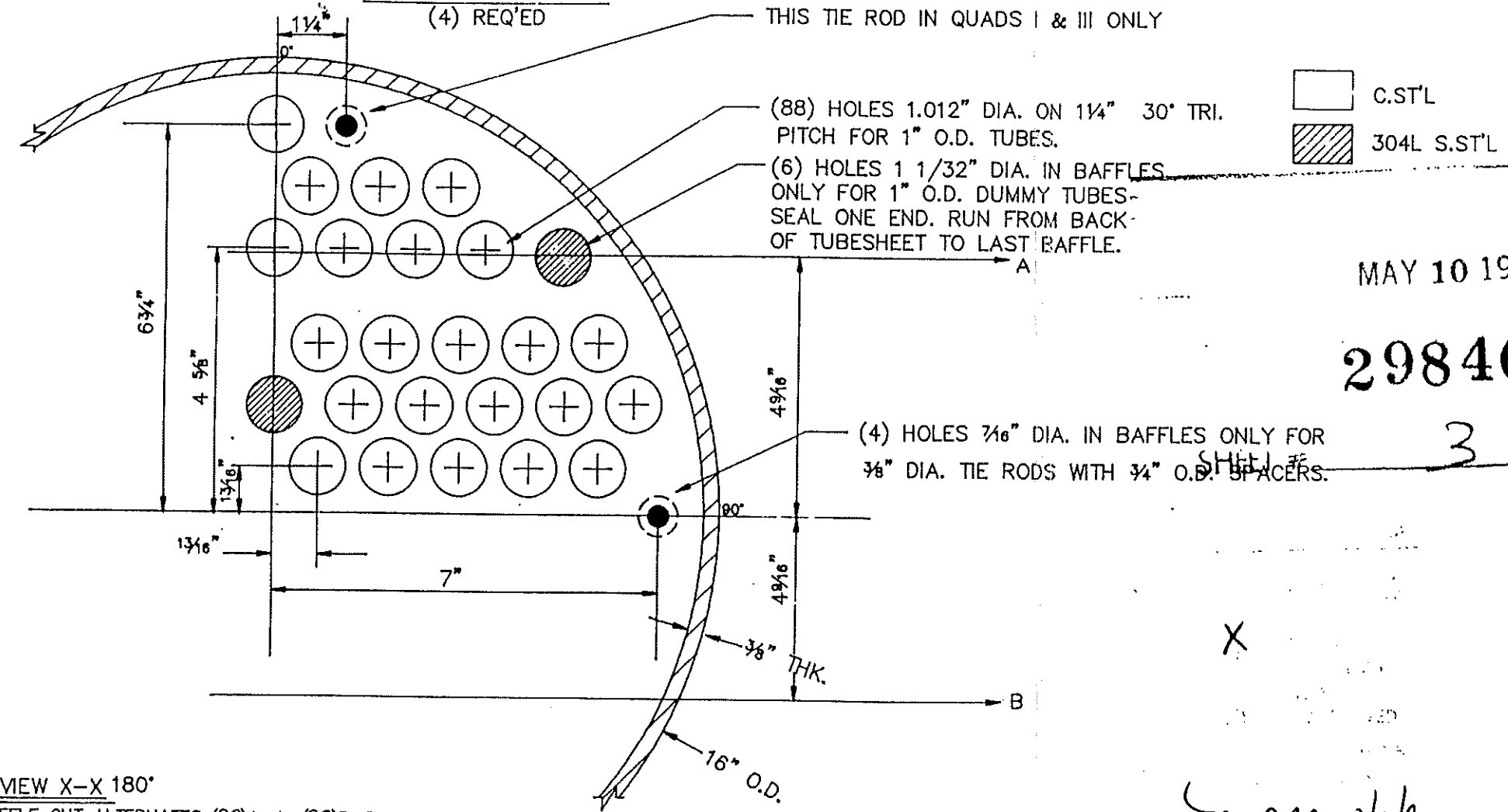
DATE 05/08/89 ORDER NO. DWG. NO. SP-2089-3

BY B. HUFF 89-027A/B SHEET 1 OF 5

5111-7053-15-2



SUPPORT DETAIL



VIEW X-X 180°  
 BAFFLE CUT ALTERNATES (29)A-A, (29)B-B  
 BAFFLE DIA.: 15.375"  
 O.T.L.: 14.5801"  
 TUBEHOLE DIA. IN BAFFLES: 1 1/32"

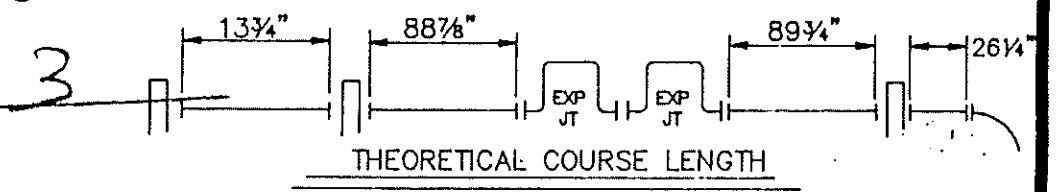
	NATIONAL BOARD NO. <input type="text" value="LATER"/>	
	CERTIFIED BY	
<h1>SOUTHERN HEAT EXCHANGER CORP.</h1>		
TUSCALOOSA, ALABAMA		
SHELL SIDE		
MADP	<input type="text" value="75/F.V."/>	PSI AT <input type="text" value="302"/> F.
MADT	<input type="text" value="32"/>	F. AT <input type="text" value="75/F.V."/>
TUBE SIDE		
MADP	<input type="text" value="75/F.V."/>	PSI AT <input type="text" value="302"/> F.
MADT	<input type="text" value="32"/>	F. AT <input type="text" value="75/F.V."/>
SHECO SER. NO. <input type="text" value="89-027 A/B"/> YEAR <input type="text" value="1989"/>		
CUST. ORDER <input type="text" value="LPBC-96110W"/>		
CUST. ITEM <input type="text" value="5111-7053-15-1 &amp; 2"/>		
<input type="text" value="LETHAL BOTH SIDES"/>		<input type="text" value="DUPONT INSP. INT'L"/>
<input type="text" value="BEAUMONT, TX"/>		<input type="text" value="PROJ. NO. 6432"/>

**SOUTHERN CAUTION**

THE PRESSURE AND TEMPERATURES SHOWN ON THE S.H.E. NAMEPLATE RELATE ONLY TO THE PRESSURE RETENTION CAPABILITY OF THIS HEAT EXCHANGER. COMPONENTS OF THIS HEAT EXCHANGER HAVE BEEN DESIGNED FOR SPECIFIC OPERATING CONDITIONS. A CHANGE IN SERVICE OR DEVIATION FROM THE SPECIFIED OPERATING CONDITIONS REQUIRES THAT A MECHANICAL DESIGN CHECK BE MADE IN ORDER TO AVOID POSSIBLE DAMAGE TO THE HEAT EXCHANGER.

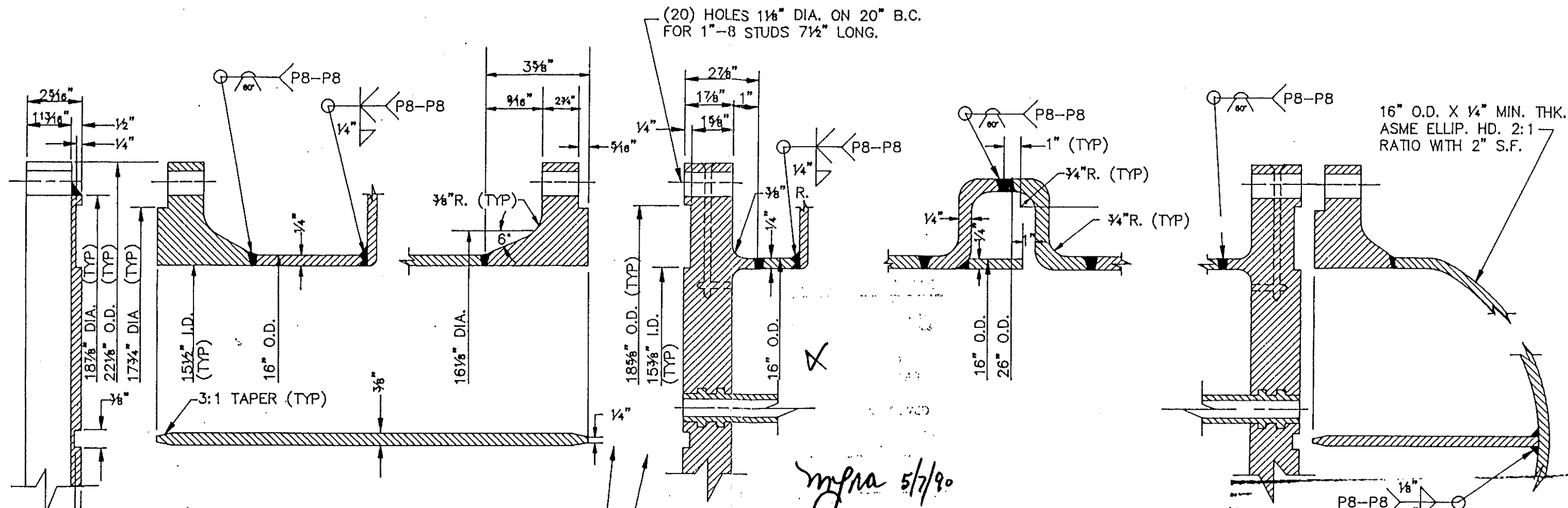
MAY 10 1990

298464



CERTIFIED	ENG.	
CUSTOMER E.I. DUPONT DE NEMOURS & COMPANY, INC.		
CUSTOMER P.O. NO. LPBC-96110W		
ITEM NO.		PROJ. NO. 6432
PLANT BEAUMONT, TEXAS		
EN NO. 5111-7053-15-1&2		
TEMA SIZE AND TYPE		
(2) 15-192 AEM RECTOR INTERCHANGER		
SOUTHERN HEAT EXCHANGER CORP.		
P.O. BOX 030008 TUSCALOOSA, AL. 35403		
DATE 05/08/89	ORDER NO.	DWG. NO. SP-2089-3
BY B. HUFF	89-027 A/B	SHEET 3 OF 5

X  
 myna 5/7/90



17 1/2" O.D. X 16 1/2" I.D. X 0.175" THK.  
 304 S.ST'L SPIRAL WOUND GRAPHITE FILLED  
 WITH 1/8" 304 S.ST'L INNER & OUTER  
 GAGE RING

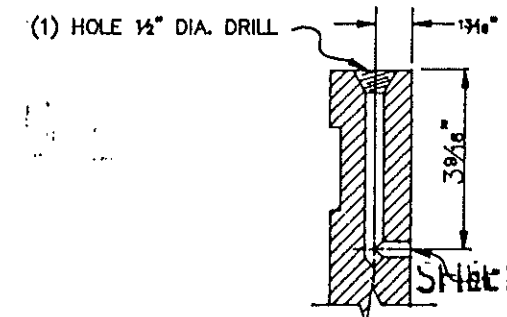
FLUSH TOP TUBESHEET. 1/8" PROJECTION BOTTOM  
 TUBESHEET. ROLL TO WITHIN 1/8" OF BACKFACE  
 OF TUBESHEET.

*myra 5/7/90*

16" O.D. X 1/4" MIN. THK.  
 ASME ELLIP. HD. 2:1  
 RATIO WITH 2" S.F.

□ C.ST'L  
 ▨ 304L S.ST'L

A. ALL WELDS THAT CANNOT BE RADIOGRAPHED  
 MUST HAVE ROOT PASS DYE CHECKED.  
 B. DYE CHECK ALL NOZZLE TO SHELL ROOT PASS  
 C. DYE CHECK 5% OF ATTACHMENT WELDS



MAY 10 1990

298464

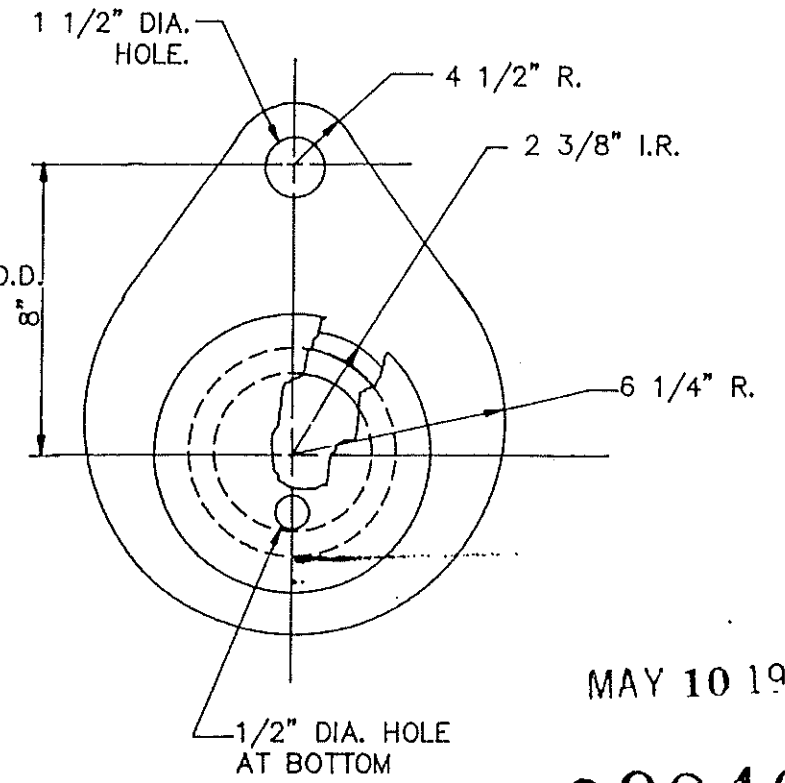
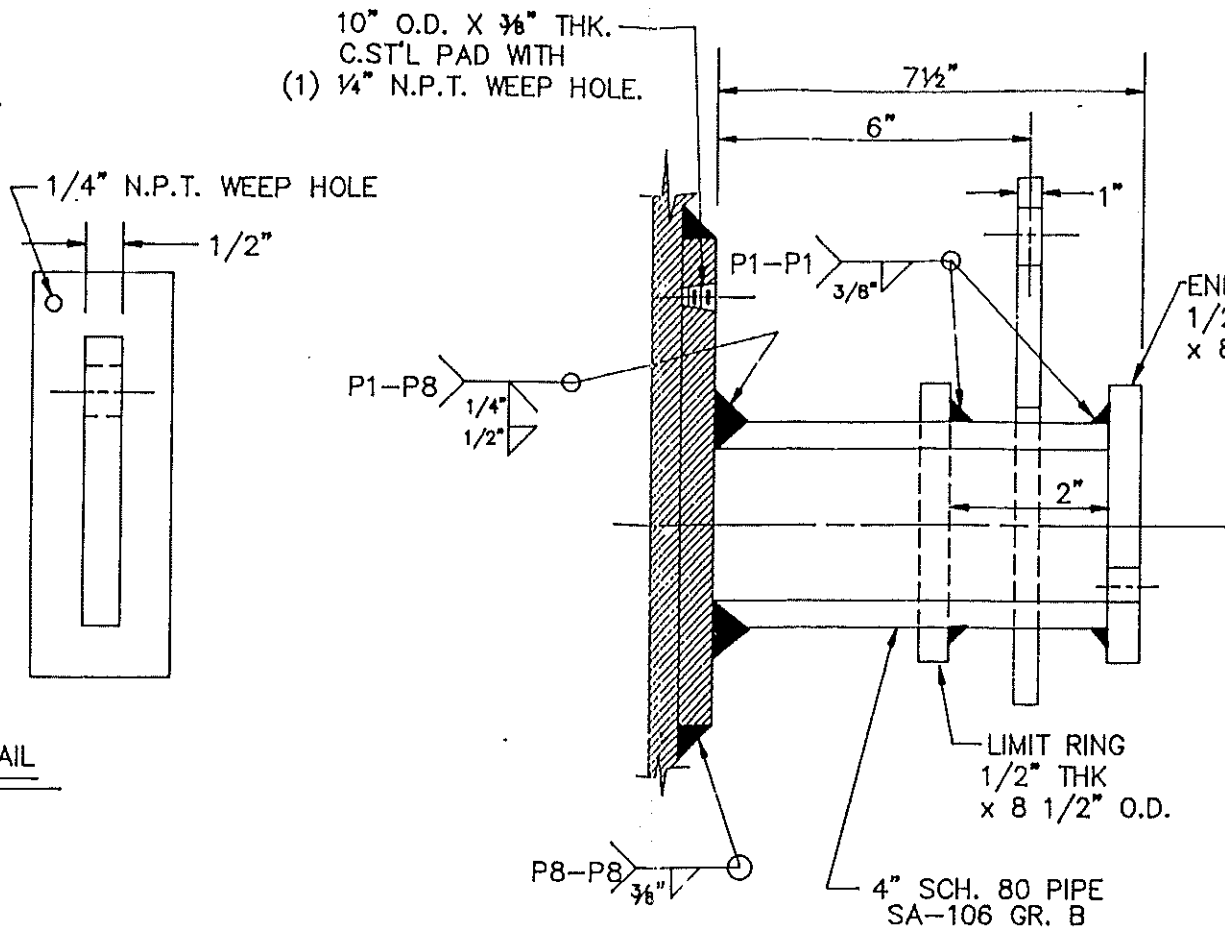
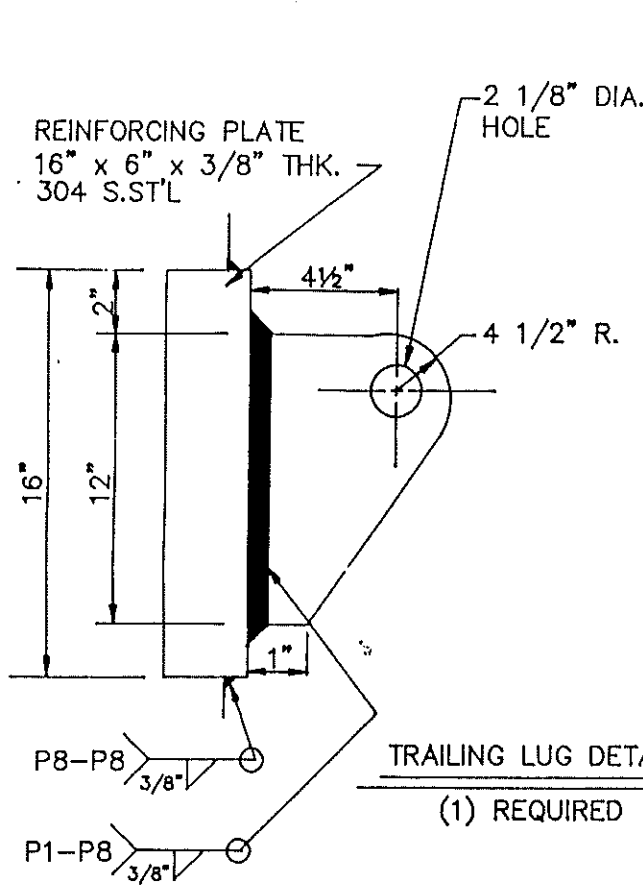
*2*

TUBESHEET VENT / DRAIN DETAIL

NOTES		
1. EST. WT. EMPTY: 4100#	FULL: 5600#	BOL: _____
2. ALL BOLT HOLES STRADOLE NORMAL CENTERLINES.		
3. WOODEN COVERS ON ALL OPEN NOZZLES. (SEE NOTE 6.)		
4. <i>WDS</i> MAIN GASKET SURFACES.		
5. PAINT: SANBLAST PER SSPC-SP-10 PRIME ALL SURFACS WITH CELCOTE FLAKETAR 8-12 MILS D.F.T. TOP COAT WITH CELCOTE FLAKETAR 8-12 MILS D.F.T. TOTAL D.F.T. 16-24 MILS.		
6. COAT ALL EXPOSED GASKET SURFACES WITH RUST VETO HEAVY. SEAL WITH CLOTH BACKED TAPE. COVER WITH WOODEN COVERS BOLTED IN PLACE WITH A FULL COMPLIMENT OF BLACK IRON BOLTS.		
7. ALL TUBES MUST BE TESTED AND INSPECTED PER DUPONT SPEC. SW300M TYPE 1 CAT. III.		
8. EST. WT. EMPTY TOP CHANNEL 1100#/BOTTOM BONNET 450#		

NON-PRESSURE PARTS	
SUPPORTS/PADS	SA-240 TP 304
BAFFLES / SUPPORTS	SA-240 TP 304
TIE ROOS / SPACERS	SA-479 TP 304/SA-249 TP 304
PASS PARTITIONS	SA-240 TP 304
LIFT LUGS	SA-240 TP 304/SA-36

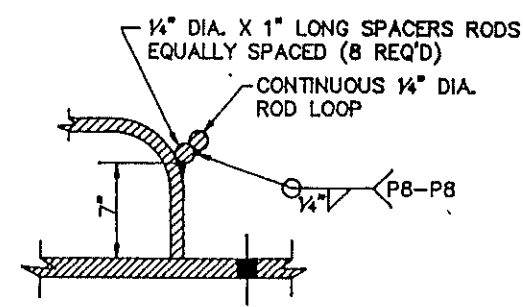
CERTIFIED	ENG.	
CUSTOMER E.I. DUPONT DE NEMOURS & COMPANY, INC.		
CUSTOMER P.O. NO. LPBC-96110W		
ITEM NO.		PROJ. NO. 6432
PLANT BEAUMONT, TEXAS		
EN NO. 5111-7053-15-1&2		
TEMA SIZE AND TYPE		
(2) 15-192 AEM REACTOR INTERCHANGERS		
SOUTHERN HEAT EXCHANGER CORP.		
P.O. BOX 030008 TUSCALOOSA, AL. 35403		
DATE 05/08/89	ORDER NO.	DWG. NO. SP-2089- 3
BY B. HUFF	89-027A/B	SHEET 2 OF 5



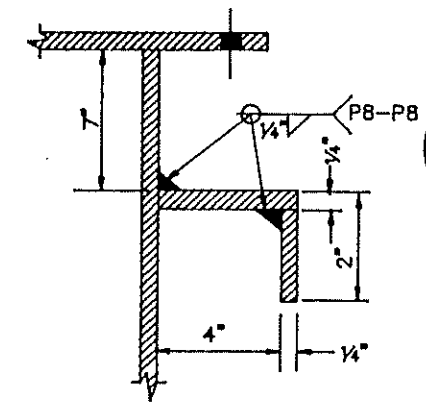
TRUNNION DETAIL  
(2) REQUIRED

MAY 10 1990  
298464

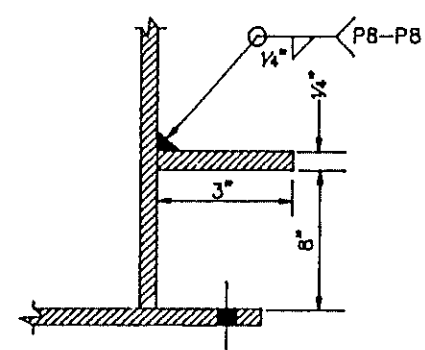
STEEL # 7  
C.ST'L  
304L S.ST'L



INSULATION SUPPORT  
TYPE A



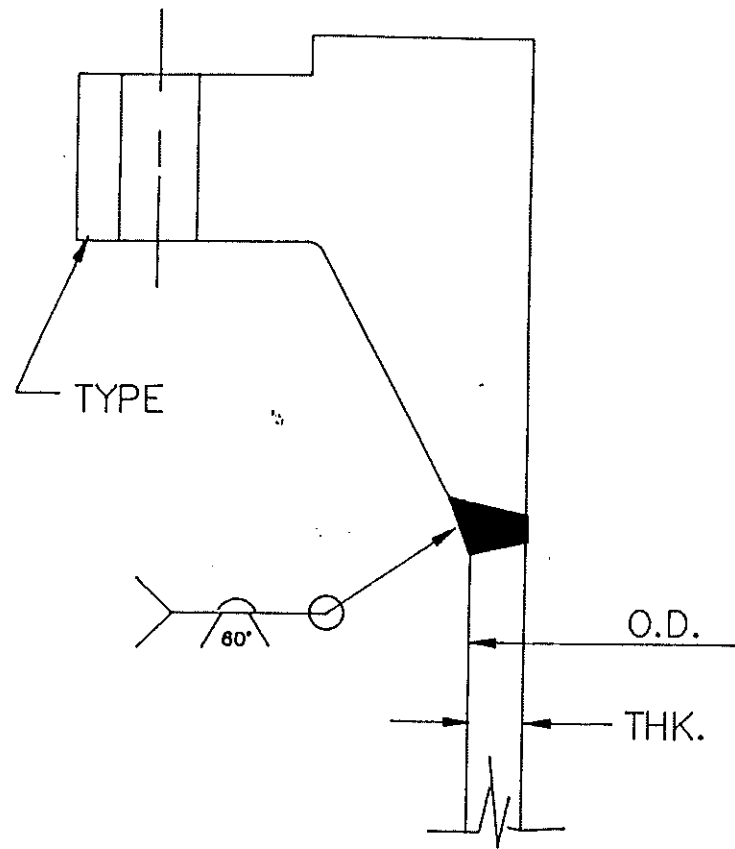
INSULATION SUPPORT  
TYPE B



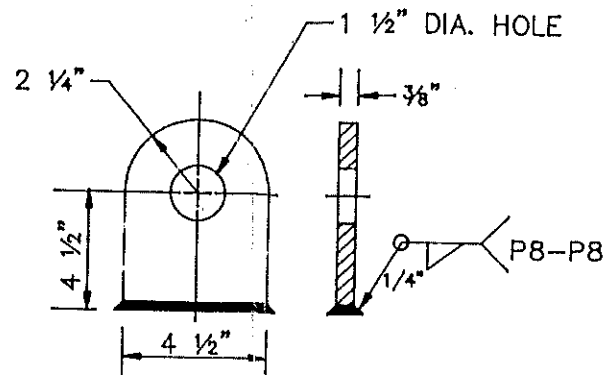
INSULATION SUPPORT  
TYPE C

*myra 5/7/90*

CERTIFIED	ENG.	
CUSTOMER E.I. DUPONT DENEMOURS & CO., INC.		
CUSTOMER P.O. NO. LPBC-96110W		
ITEM NO. EN NO. 5111-7053-15-1&@	PROJ. NO. 6432	
PLANT BEAUMONT, TEXAS		
TEMA SIZE AND TYPE (2) 15-192 AEM REACTOR INTERCHANGER		
SOUTHERN HEAT EXCHANGER CORP.		
P.O. BOX 030008 TUSCALOOSA, AL. 35403		
DATE 11-13-89	ORDER NO.	DWG. NO. SP-2089-3
BY N.B.Y.	89-027	SHEET 5 OF 5

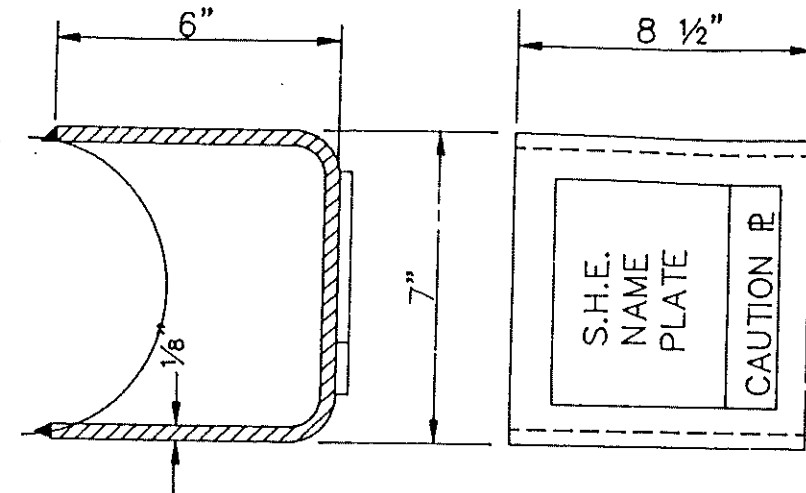


RFWN NOZZLE DETAIL



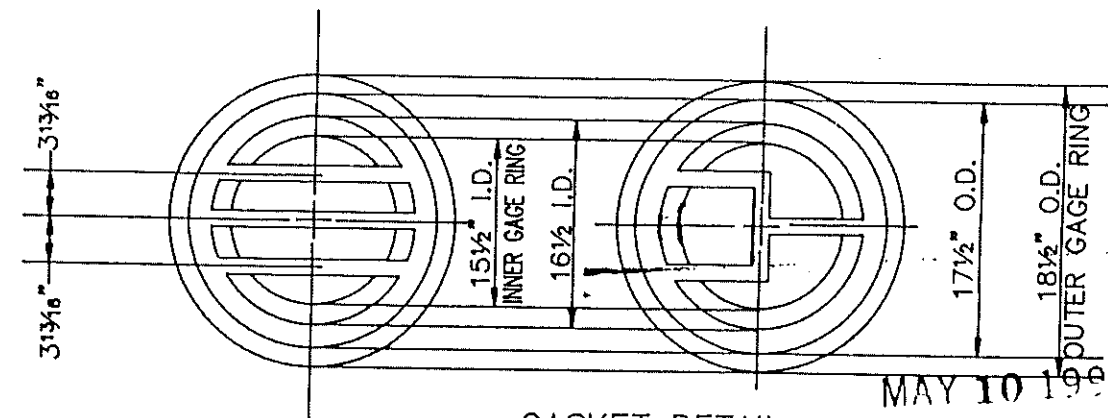
LIFT LUG DETAIL

( 9 ) REQ'D



NAME PLATE BRACKET DETAIL

NOTE: NAME # MUST BE ATTACHED USING 304 S. ST'L DRIVE SCREWS.



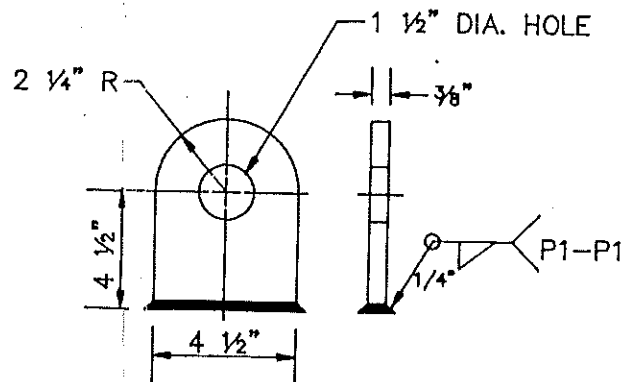
GASKET DETAIL

MAY 10 1989

S.H.E. MARK	TYPE	O.D.	THK.	MAT'L
Z2	4"-150#	4 1/2"	.237"	S.ST'L
Z1,U1-2	3"-150#	3 1/2"	.216"	S.ST'L
V5, D4	2"-150#	2 3/8"	.154"	S.ST'L
D1-3,V1-4,K,L	1"-150#	1.315"	.133"	S.ST'L
	1/2"-150#	0.840"	.147"	S.ST'L

□ C.ST'L

▨ 304L S.ST'L



LIFT LUG DETAIL

( 1 ) REQ'D

298464

4

CERTIFIED	ENG.	
CUSTOMER E.I.DUPONT DE NEMOURS & COMPANY, INC.		
CUSTOMER P.O. NO. LPBC-96110W		
ITEM NO.		PROJ. NO. 6432
PLANT BEAUMONT, TEXAS		
EN NO. 5111-7053-15-1&2		
TEMA SIZE AND TYPE		
(2) 15-192 AEM REACTOR INTERCHANGER		
SOUTHERN HEAT EXCHANGER CORP.		
P.O. BOX 030008 TUSCALOOSA, AL. 35403		
DATE 03/07/89	ORDER NO.	DWG. NO. SP-2089-3
BY B. HUFF	89-027 A/B	SHEET 4 OF 5