

TIE ROD & SPACER PIPE SCHEDULE			
1/4" SCH 80S SPACER PIPE	1/4" TIE RODS		
(3) REQ'D. @ 6 1/8" LG.	(3) REQ'D. @ 65" LG.		
(1) REQ'D. @ 8 5/8" LG.	(1) REQ'D. @ 62 1/2" LG.		
(46) REQ'D. @ 2 3/8" LG.			
(22) REQ'D. @ 4 7/8" LG.			

NOZZLE SCHEDULE					
MARK	QTY.	SIZE	RATING	TYPE	SCH.
A	1	1"	150#	RFSO	10S
B	1	1"	150#	RFSO	10S
C	1	3"	150#	RFSO	10S
D	1	1"	150#	RFSO	10S
E	1	1"	150#	RFSO	10S
F	1	1 1/2"	150#	RFSO	10S
G	1	1"	150#	RFSO	10S
H/J/K	3	3/4"	3000#	NPT	-
P	2	1/2"	3000#	NPT	-
					PRESSURE GAGE CONN.

NOTE:
ALL NPT CONNECTIONS ARE TO BE FITTED WITH
HEX HEAD PLUGS OF THE SAME MATERIAL AS
THE CONNECTION.

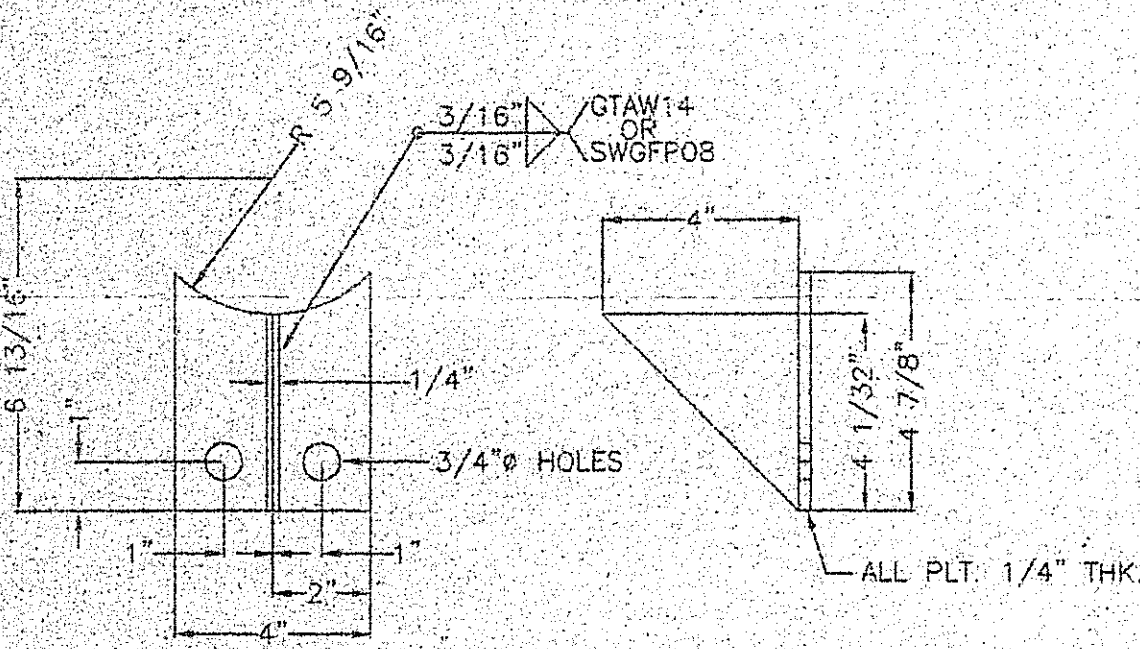
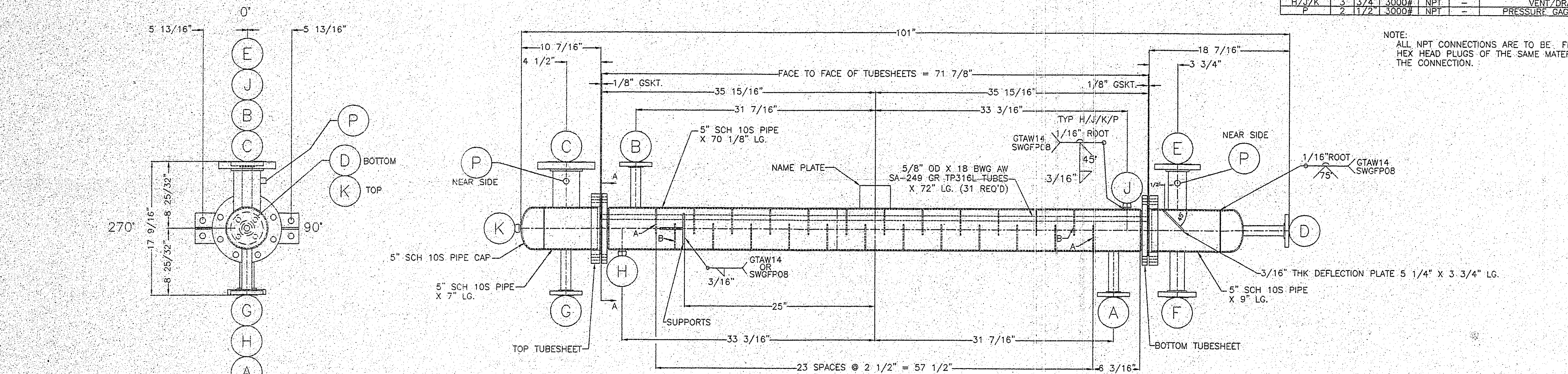
DESIGN DATA
DESIGN & FABRICATION
ASME SECTION VIII, DIV. 1, 1998 ED., 1999 ADD. & TEMA "B"
TUBE SIDE DESIGN
DESIGN PRESSURE: 150/-15 PSIG
DESIGN TEMPERATURE: 150°F
CORROSION ALLOWANCE: NONE
TEST PRESSURE: 195 PSIG
TEST PROCEDURE: HYDROSTATIC (1) HR. MIN.
SHELL SIDE DESIGN
DESIGN PRESSURE: 150/-15 PSIG
DESIGN TEMPERATURE: 150°F
CORROSION ALLOWANCE: NONE
TEST PRESSURE: 195 PSIG
TEST PROCEDURE: HYDROSTATIC (1) HR. MIN.

MATERIAL SPEC
TUBES: SA-249 GR TP 316L
TUBESHEETS: SA-240 GR 316L
TUBE SIDE BONNET PIPE: SA-312 GR TP316L (ERW)
TUBE SIDE BODY FLANGES: SA-240 GR 316L
TUBE SIDE NOZZLE PIPE: SA-312 GR TP316L (ERW)
TUBE SIDE NOZZLE FLANGES: SA-182 GR F316L
TUBE SIDE PIPE CAPS: SA-403 GR 316L
TUBE THREADOLETS & PLUGS: SA-182 GR F316L
TUBE SIDE GASKETS: GYLON #3510 (OR EQUAL)
MAIN SHELL PIPE: SA-312 GR TP316L (ERW)
SHELL SIDE NOZZLE PIPE: SA-312 GR TP316L (ERW)
SHELL SIDE NOZZLE FLANGES: SA-182 GR F316L
SHELL SIDE THREADOLETS & PLUGS: SA-182 GR F316L
SUPPORT ASSEMBLIES: SA-240 GR 304
BAFFLE CAGE ASSEMBLY: 316L S.S.
DEFLECTION PLATE: SA-240 GR 316L
NAME PLATE BRACKET: 304 S.S.
BOLTS: SA-193 GR B7
NUTS: SA-194 GR 2H

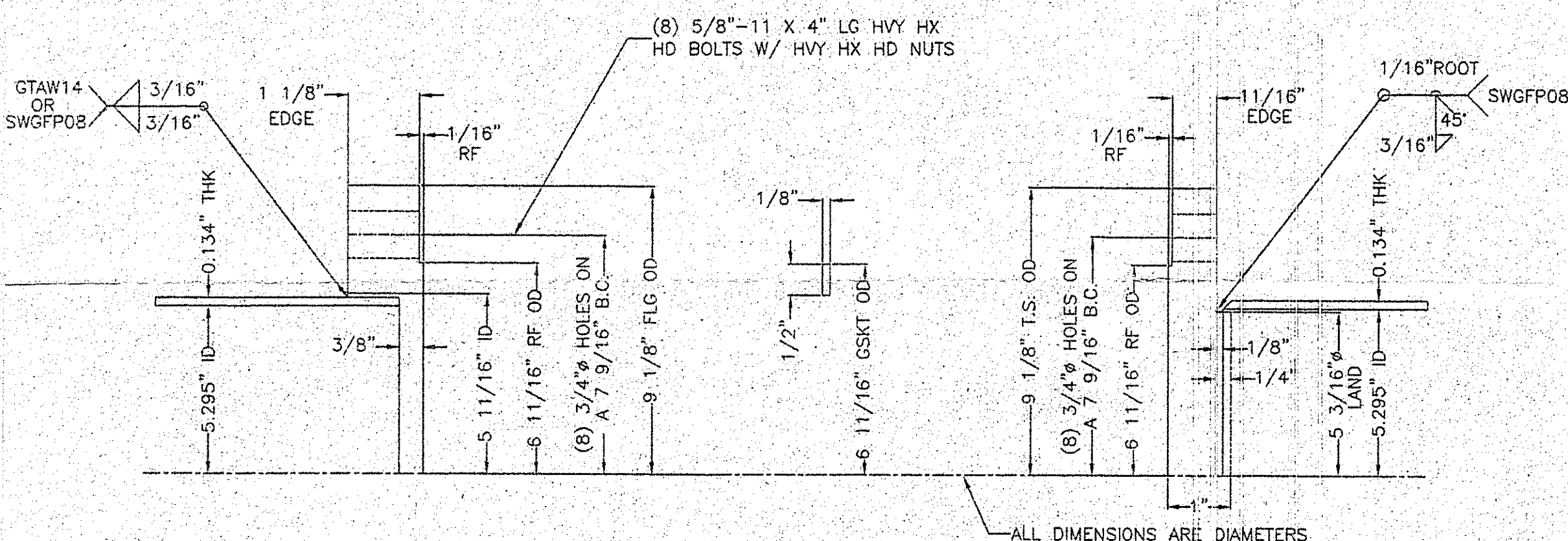
NOTES
1. (2) UNIT(S) REQ'D.
2. ALL DIMENSIONAL TOLERANCES PER TEMA STD.
3. ALL NOZZLE BOLT HOLES SHALL STRADDLE THE UNIT'S C.L.'S
UNLESS OTHERWISE NOTED.
4. ALL FLANGES TO BE COVERED WITH 1/2" THK
PLYWOOD COVERS BEFORE SHIPMENT.
5. WEIGHTS: UNIT DRY: 469 LBS. UNIT FLOODED: 582 LBS.

FIT-UP TOLERANCES
1. ALL ROOT OPENINGS TO ± 1/16"
2. ALL WELD BEVELS TO ± 5°
3. ALL WELD LANDS TO 1/16"
4. MAXIMUM MISALIGNMENT: THE LESSER OF 1/4" OR 1/8".

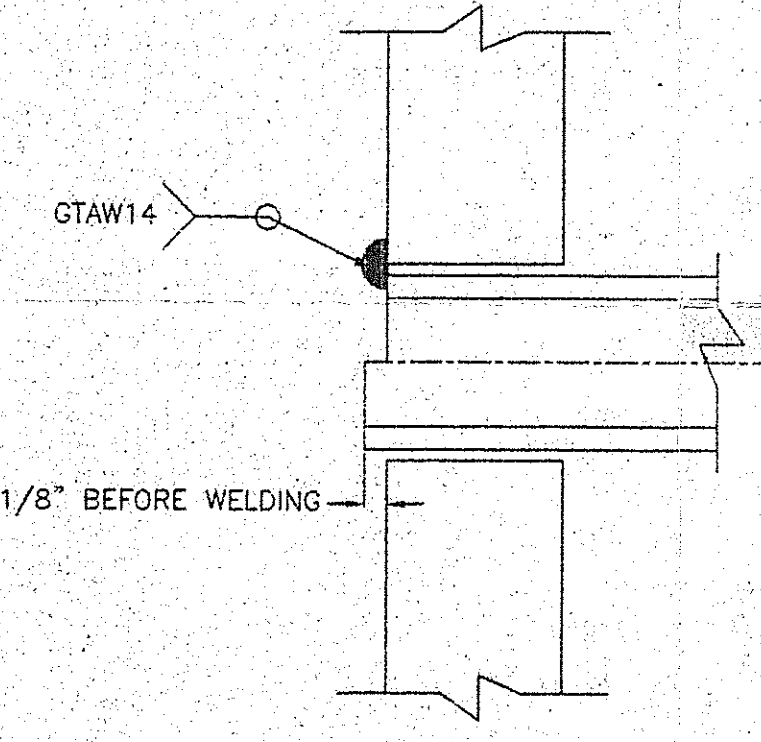
WELDING
1. GTAW14 USING ER316L FILLER METAL
2. SWGFP08 USING E316LT-1 FILLER METAL
ALL TACKS PER GTAW14 OR SWGFP08



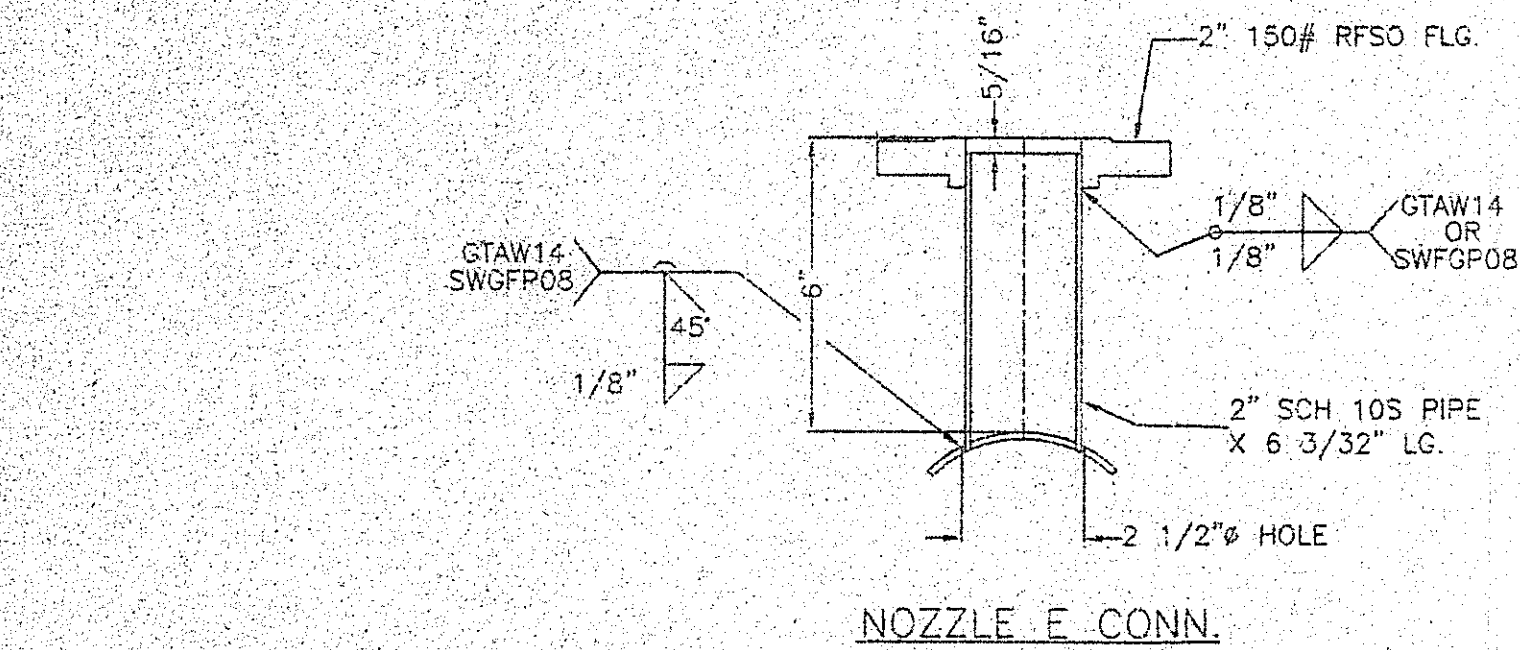
SUPPORT DTL
(2) REQ'D



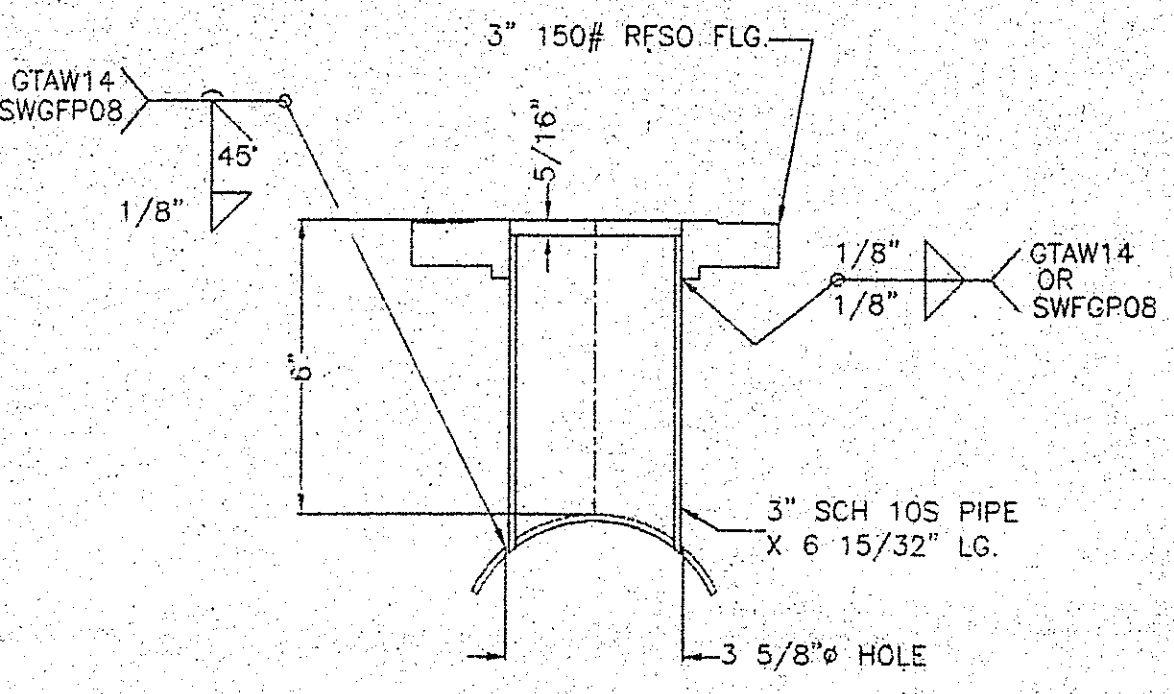
TYP BONNET & TUBESHEET CONN.



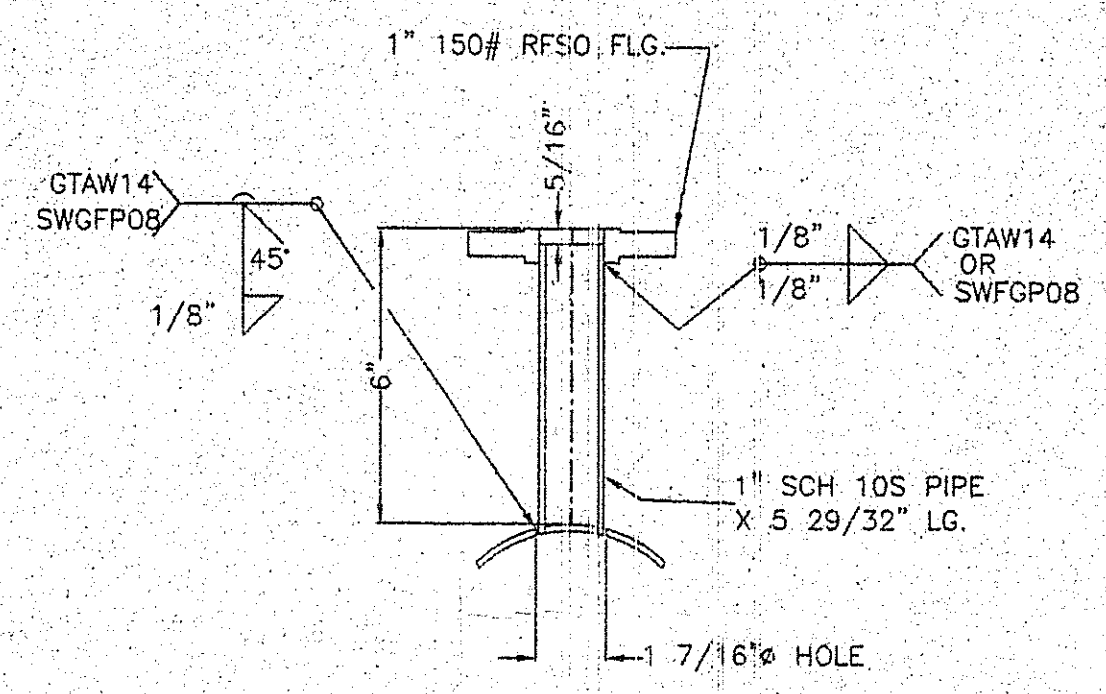
SEAL WELD DETAIL



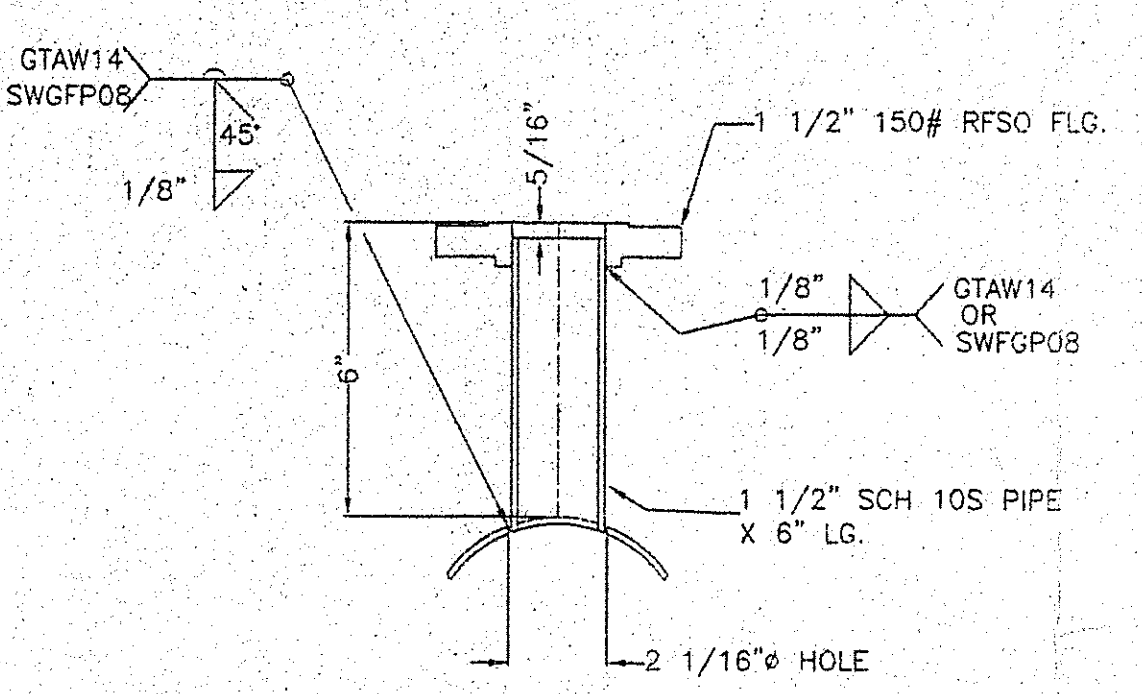
NOZZLE E CONN.



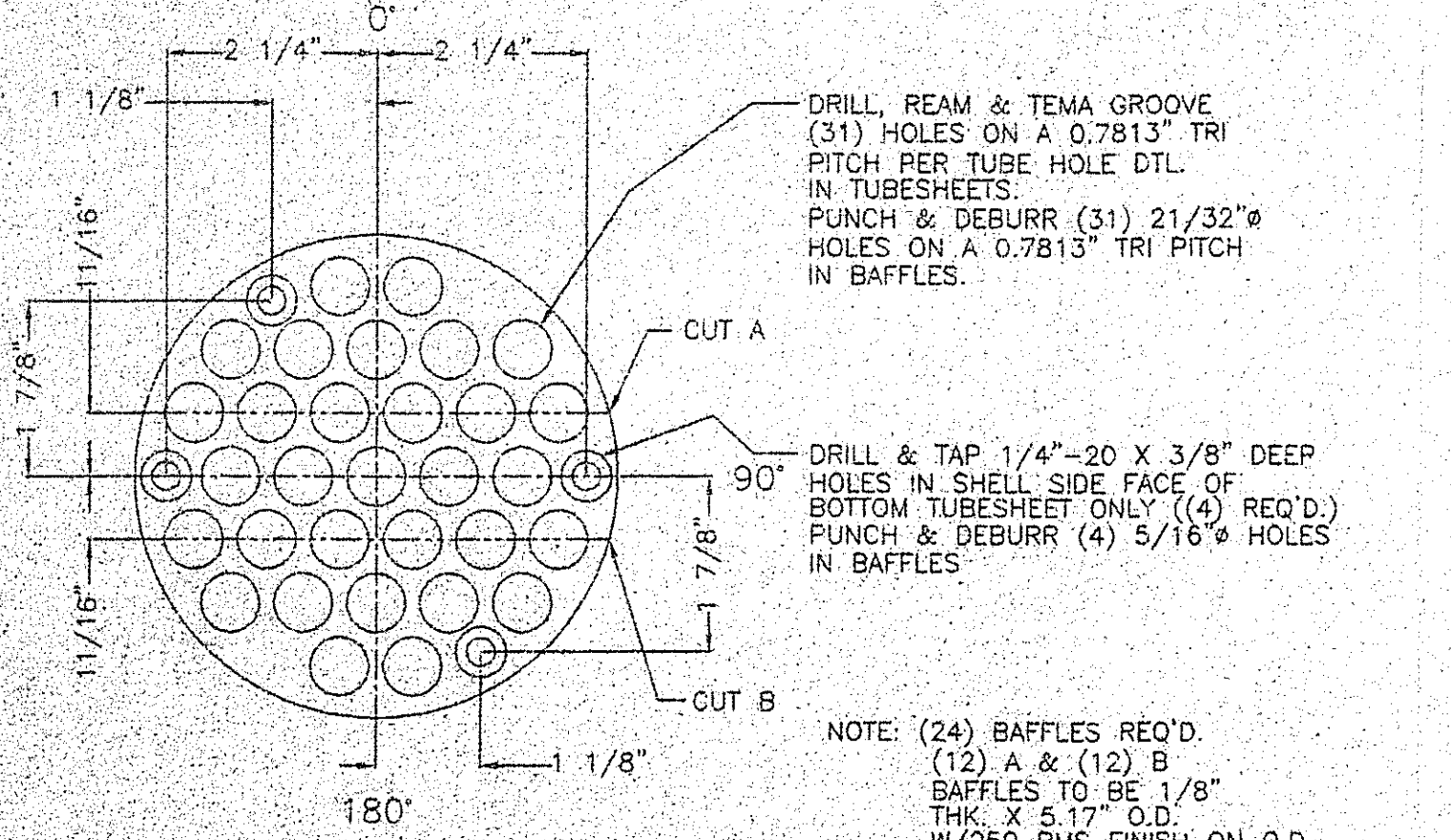
NOZZLE C CONN.



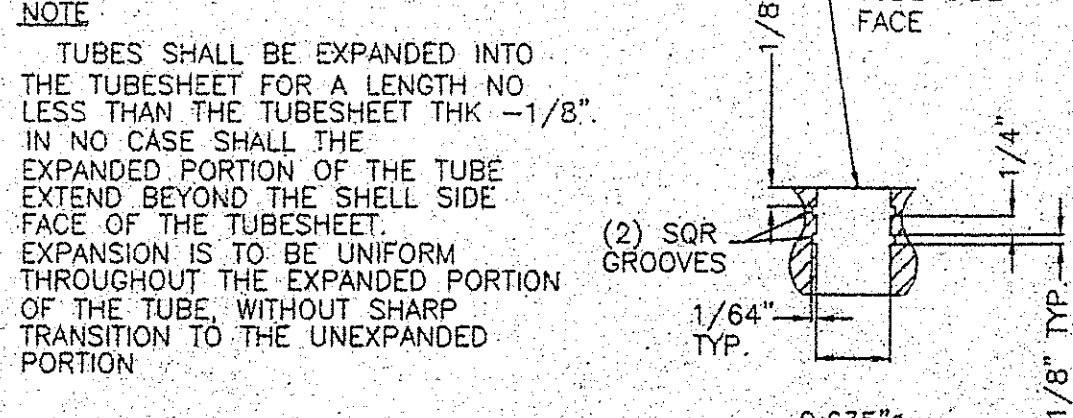
NOZZLE A/B/G CONN.



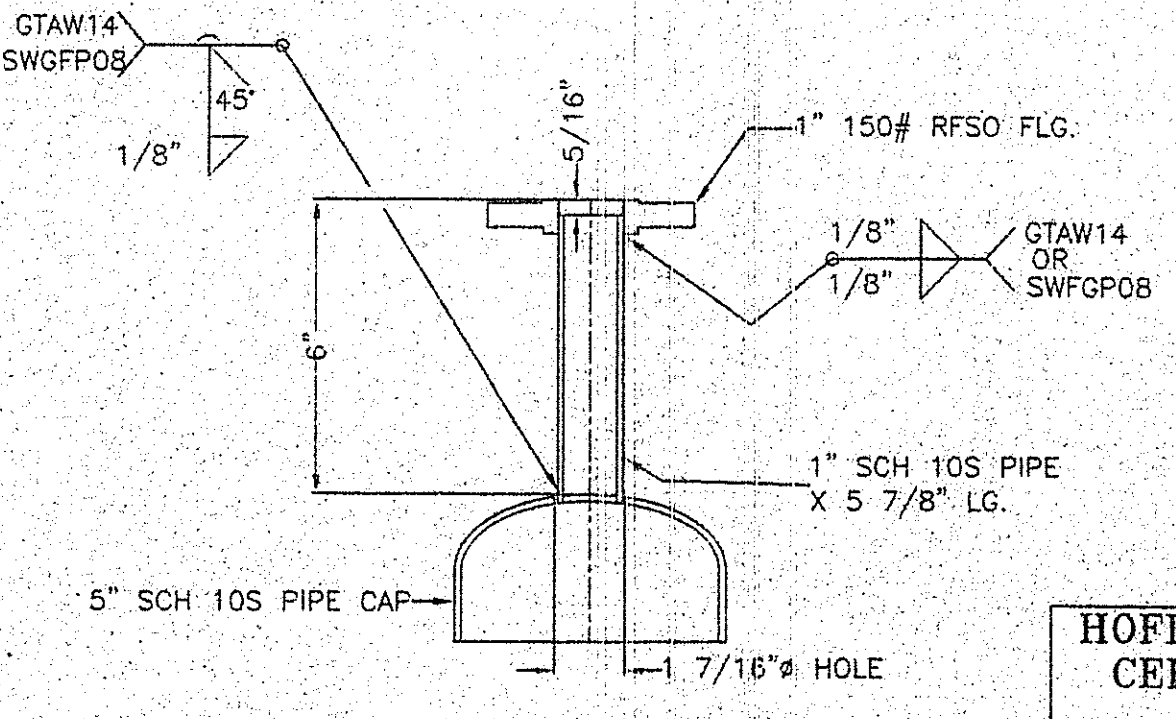
NOZZLE F CONN.



SECTION A-A
TUBE FIELD



TUBE HOLE DTL



NOZZLE D CONN.

HOFFMAN PROCESS, INC.
CERTIFIED DOCUMENT
BY: *S. J. Lanthier*
CHIEF ENGINEER
DATE: 8-1-00

	BY	DATE
DRAWING	E.R.W.	8/17/2000
CHECKED	R.P.	8-30-00
APPROVED (INITIAL)	S.J.L.	8-1-00
APPROVED (FINAL)	S.J.L.	8-1-00
QUALITY CONTROL		
AUTH. INSPECTOR		

NAT'L BD.	
(National Board Serial Number)	
CERTIFIED BY	HOFFMAN
PROCESS, INC.	
TUBESIDE:	150/-15 psi at 150°F
MINIMUM DESIGN	(Maximum Allowable Working Pressure)
METAL TEMPERATURE	-20°F at 150/-15 psi
SHELLSIDE:	150/-15 psi at 150°F
MINIMUM DESIGN	(Maximum Allowable Working Pressure)
METAL TEMPERATURE	-20°F at 150/-15 psi
3196 A/B	2000
PO# 47036650	ITEM# VPC-8 / VPC-9
WO# 3745	

1	REVISED PER CUSTOMER REQUEST	F.R.W.	8/30/2000
#	REVISION	BY	DATE
HOFFMAN PROCESS, INC.			
PITTSBURGH, PA.			
VENT CONDENSERS FOR EK-8/9 REACTORS			
MODEL #5-72 BEM			
CUSTOMER: COGNIS CORPORATION			
PROJECT NAME:		ITEM #: VPC-8 / VPC-9	
PROJECT LOC: CHARLOTTE, NC		PO #: 47036650 / WO# 3745	
SCALE:	DWG. #	REV.	
SHOP ORDER #: 3196	3196-1 OF 1	1	

LCEC Item #
114061
114063