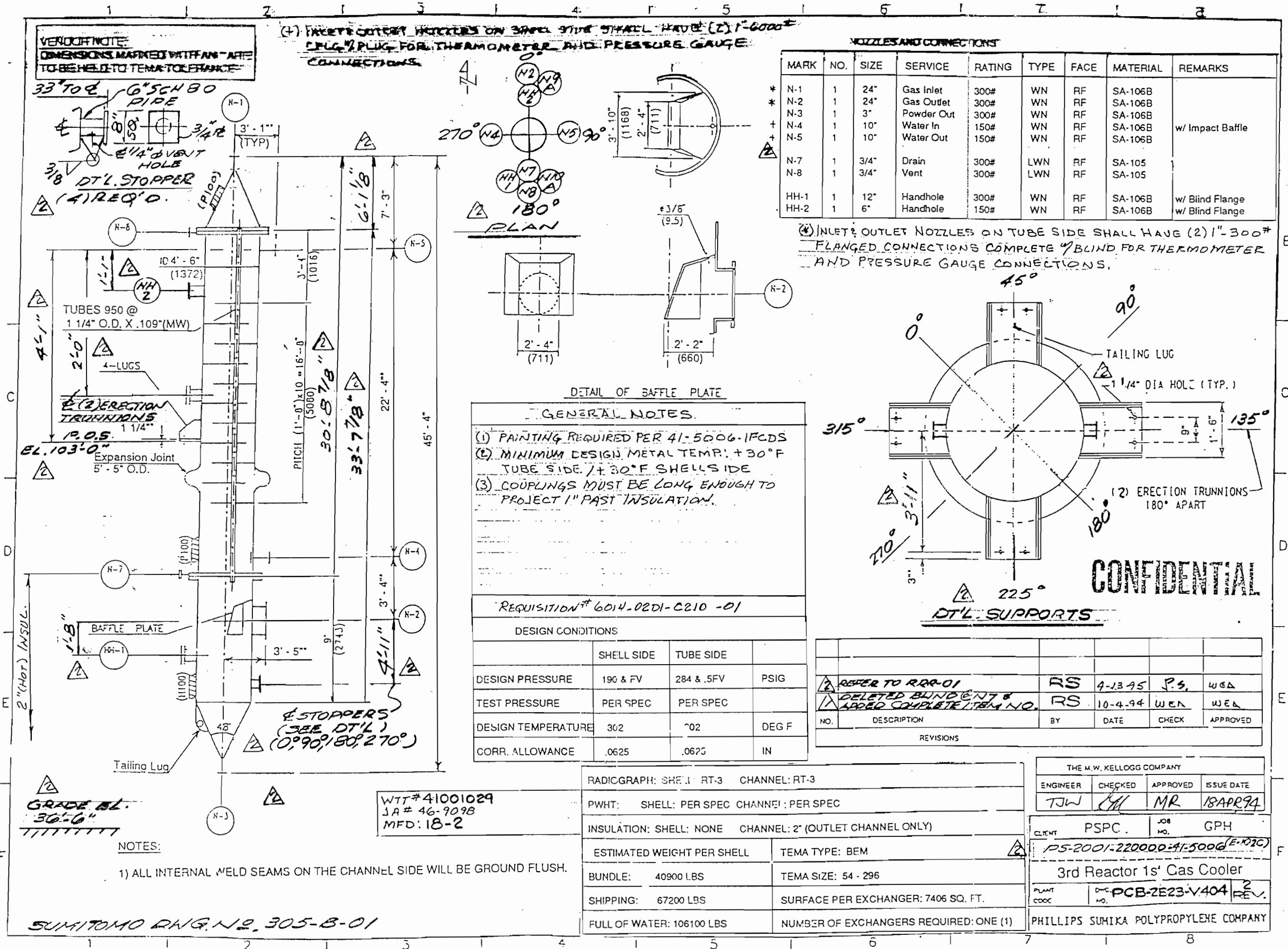
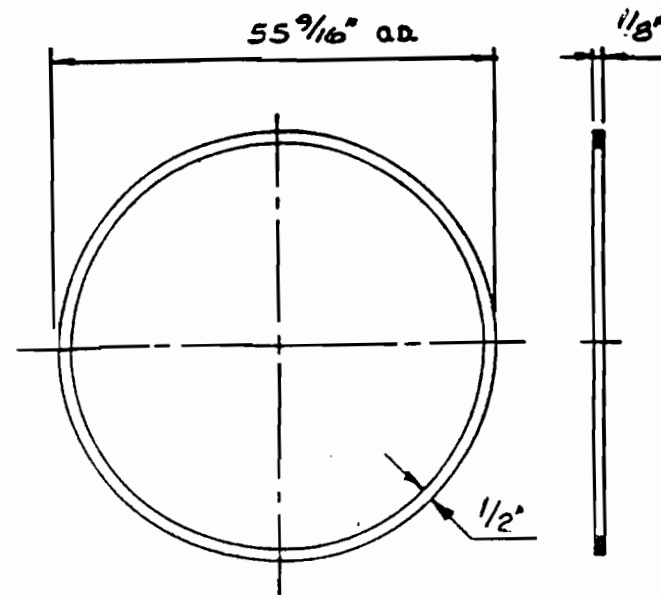
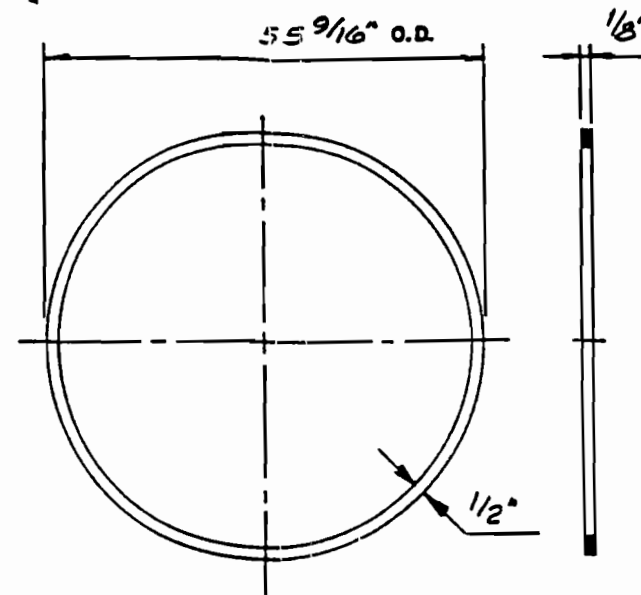


APPROVED
BY ccw 3/18/93

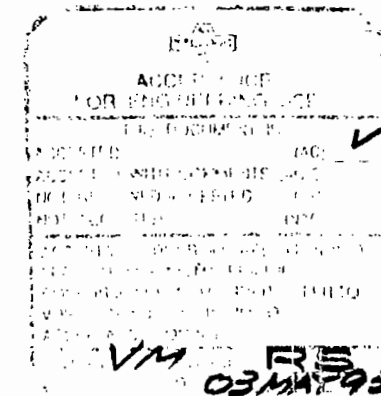




ACR TO ATS
MAT'L. C. STL. DBL. JKT'D. NON-ASB.
(ANNEALED)



BTS TO BCR
MAT'L. C. STL. DBL. JKT'D. NON-ASB.
(ANNEALED)



CERTIFIED
PRINT

APR 25 1995
TEXAS METAL
FABRICATING CO.
A TRINITY INDUSTRIES CO.
HOUSTON, TEXAS

BOLT SCHEDULE			
LOCATION	NO. REQ'D EACH ASSEMBLY	SIZE	LENGTH
ACR TO ATS	80	7/8" ϕ NC	11"
BTS TO BCR	80	7/8" ϕ NC	11"
MATERIAL: STUDS TO BE SA-193-B7 WITH TWO (2) AMERICAN STANDARD HEAVY DIM. HEX NUTS EACH SA-194-CL-2H			

ONE SET(S) OF GASKETS REQ'D. EACH ASSEMBLY
2 SET(S) OF SPARE GASKETS REQ'D. EACH ASSEMBLY



FABRICATION DETAIL- GASKETS DETAILS & BOLTING SCHEDULE

REFERENCE
94062

NO. 9461

MADE DLT	DATE 1/5/95	CHKD Jm	DATE 1-25-95	APVD Jm	DATE 1-25-95	SHEET 15
-------------	----------------	------------	-----------------	------------	-----------------	----------

PHILLIPS SUMIKA POLYPROPYLENE COMPANY
PASADENA, TEXAS
M.W. KELLOGG P.O. NO. 6014-02D1-C210-01
ITEM NO. PS-2001-220000-41-5006
3RD REACTOR 1ST GAS COOLER
MANUFACTURER'S SERIAL NO. 9461
WTT #41001029

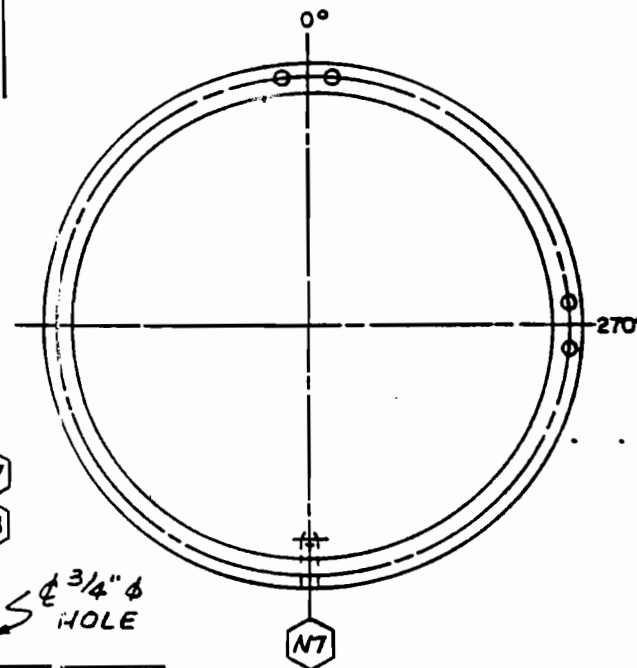
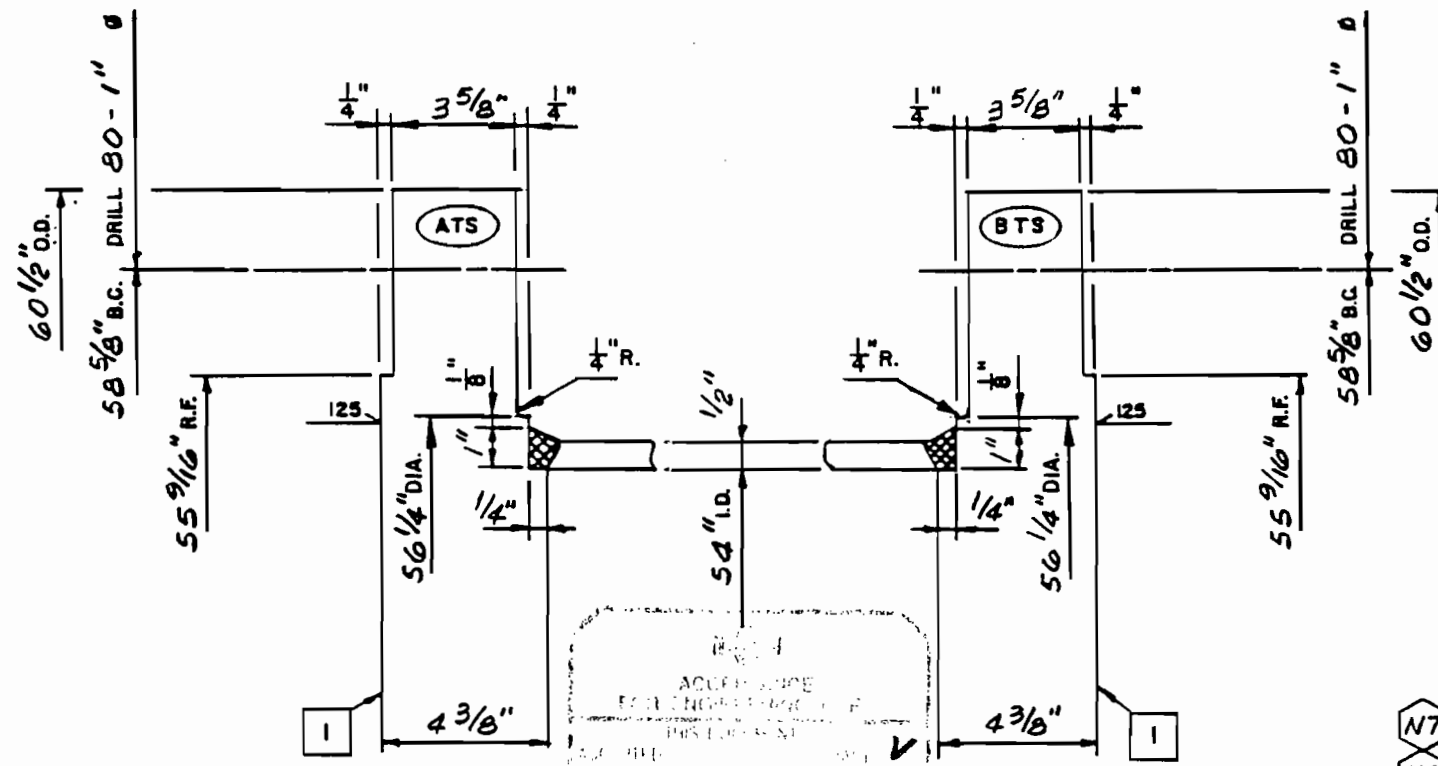
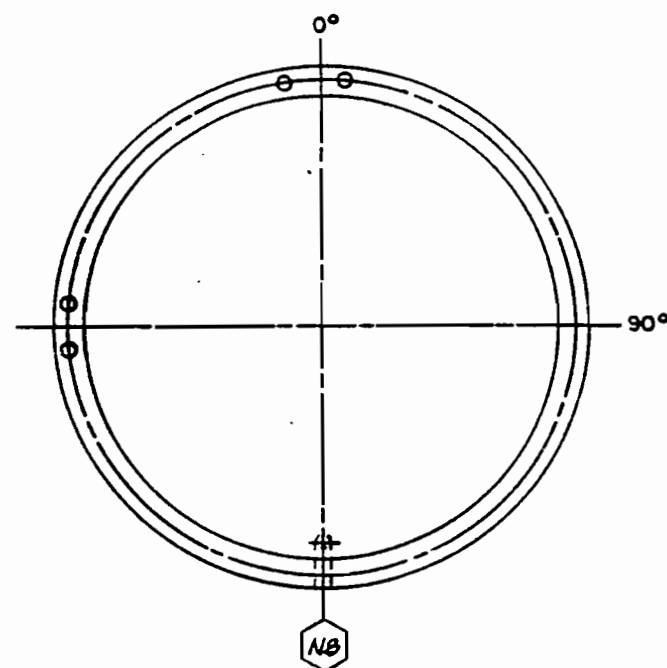
PHILLIPS SUMIKA POLYPROPYLENE COMPANY
PASADENA, TEXAS
M.W. KELLOGG P.O. NO. 6014-02D1-C210-01
ITEM NO. PS-2001-220000-41-5006
3RD REACTOR 1ST GAS COOLER
MANUFACTURER'S SERIAL NO. 9461
WTT #41001029

TUBES: 950 - 1 1/4" O.D. x .110" MW x 24'-8" LG.
SA-214

950

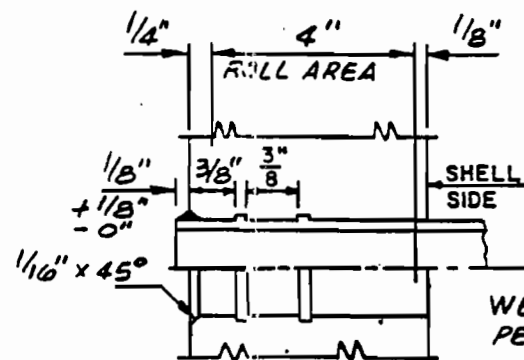
[illegible]

02.01.0



TUBE-TUBESHEET WELD PROCEDURE:

1. PREPARE THE JOINT.
 - A. CHAMFER TUBE HOLES 1/16" X 45 DEGREES.
 - B. CLEAN THE FACE OF THE TUBESHEET, ALL TUBE HOLES, AND ALL TUBES WITH ACETONE FOR A MINIMUM LENGTH OF 1 FOOT FROM EACH END.
 - C. SET TUBES TO PROJECT 1/8" (+1/8", -0") FROM THE FACE OF THE TUBESHEET.
2. GIVE TUBES A LIGHT ROLLING TO OBTAIN METALLIC CONTACT PRIOR TO WELDING. DO NOT USE LUBRICANT FOR THIS STEP.
3. GTAW WELD CARBON STL. JOINTS WITH AWS A5.18 ER 70S-2 FILLER METAL.
4. LIQUID PENETRANT EXAMINE ALL WELDS AND THEN CLEAN THEM WITH ACETONE. REPAIR ANY DEFECTIVE WELDS AND RECHECK.
5. WELD 2ND PASS, GTAW WITH AWS A5.18 ER 70S-2 FILLER METAL.
6. REPEAT STEP NO. 4 FOR 2ND PASS.
7. LEAK TEST: APPLY SOAP SUDS SOLUTION TO TUBE WELDS WHILE MAINTAINING 15 PSI AIR PRESSURE ON SHELL SIDE OF TUBESHEET.
8. ROLL TUBES WITH OIL USING CONTROLLED METHOD (4 1/2 TO 5% TUBE WALL REDUCTION). DO NOT ROLL IN WELD AREA.
9. REPEAT STEP NO. 7.
10. FINAL LIQUID PENETRANT EXAMINE.
11. HYDRO TEST AT FULL SHELL SIDE TEST PRESSURE.



TUBE HOLE GROOVING DETAIL
 1/8" WIDE X 1/32" DEEP GROOVES
 (+)0.003" (-)0.003" TUBE HOLE DIA
 DEBURR TUBE HOLES BOTH SIDES

REAM TO 1.261"

WELD TUBES TO TUBESHEET
 PER TMF PROC. SP-205C

* CV = 15/12 FT. LBS. @ 30°F

SA-266-2*

CERTIFIED
 PRINT
 APR 25 1995
 TEXAS METAL
 FABRICATING CO.
 A TRINITY INDUSTRIES CO.
 HOUSTON, TEXAS



FABRICATION DETAIL - TUBESHEETS

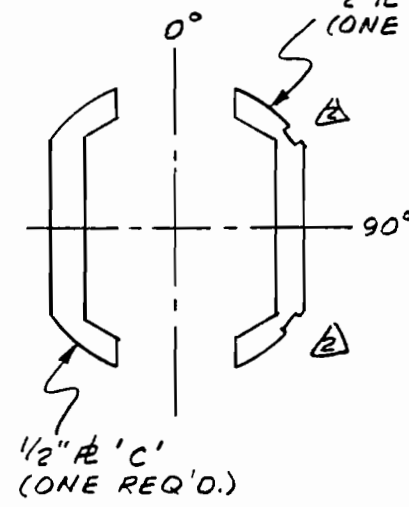
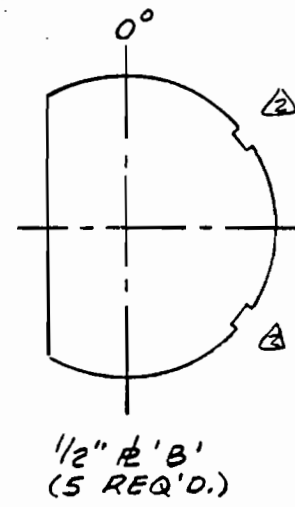
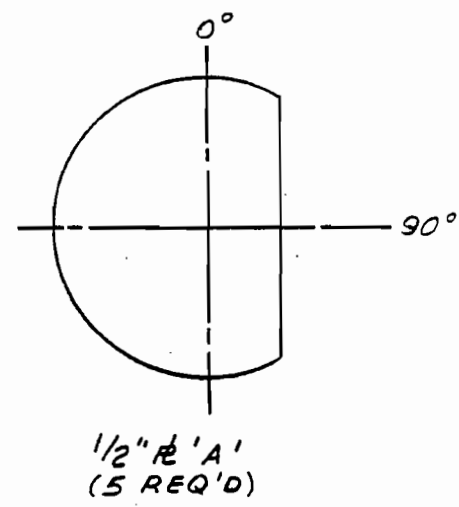
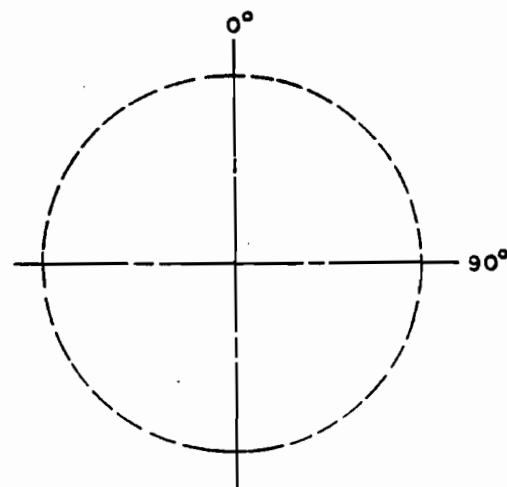
MADE	DATE	CHKD	DATE	APVD	DATE
DLT	12/1/94	SM	1-25-95	SM	1-25-95

REFERENCE	94062
NO.	9461
SHEET	13

REVISIONS

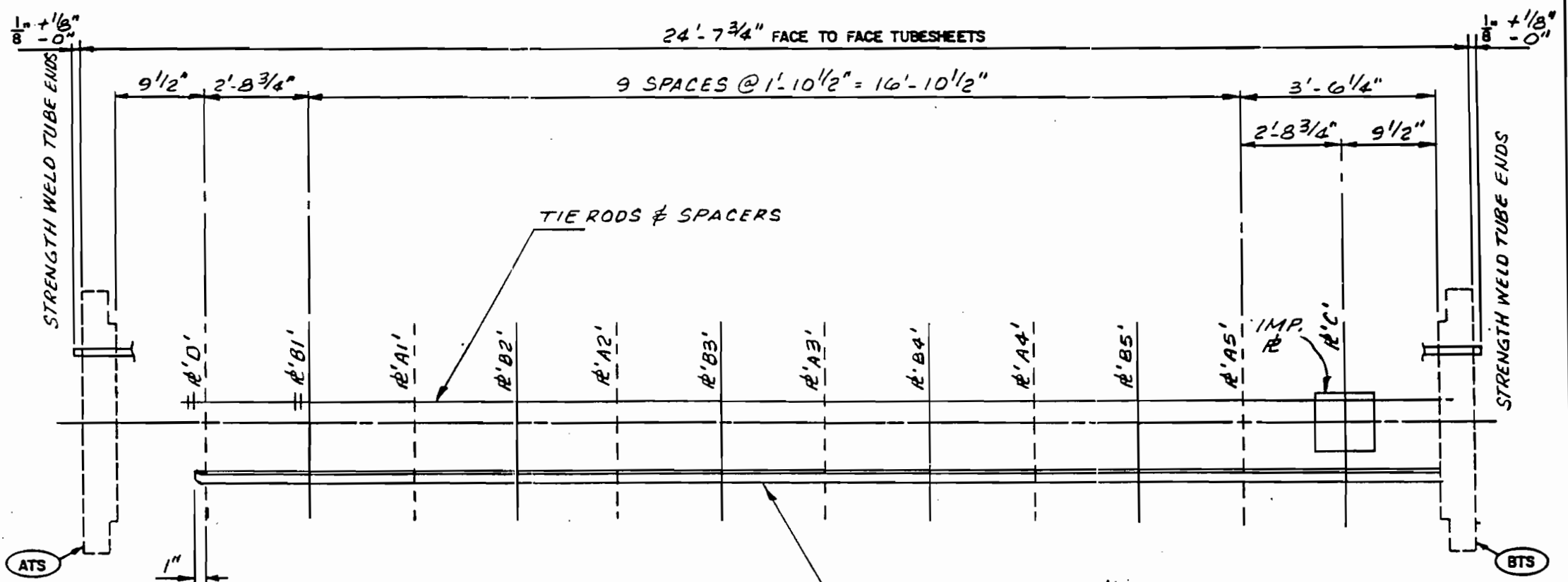
PHILLIPS SUMIKA POLYPROPYLENE COMPANY
 PASADENA, TEXAS
 M.W. KELLOGG P.O. NO. 6014-02D1-C210-01
 ITEM NO. PS-2001-220000-41-5006
 3RD REACTOR 1ST GAS COOLER
 MANUFACTURER'S SERIAL NO. 9461
 WTT #41001029

7-476



GROSS BAFFLE & SUPPORT DETAILS
MAT'L: SA-36

BAFFLES VIEWED FROM SHELL SIDE OF (BTS)



ACCEPTANCE FOR ENGINEERING USE	
THIS DOCUMENT IS	
ACCEPTED	(AC)
ACCEPTED WITH COMMENTS (AC C)	
NOT REVIEWED/ACCEPTED	(N-R)
NOT ACCEPTED	(N-A)
ACCEPTANCE DOES NOT RELIEVE VENDOR FROM LIABILITY FOR MATERIAL IN CONFORMANCE WITH ORDER REFER TO VENDOR FOR FULL DESCRIPTION OF ACCEPTANCE CONDITIONS	
DATE 09/30/95	

CERTIFIED PRINT
MAY 12 1995
TEXAS METAL FABRICATING CO.
A TRINITY INDUSTRIES CO.
HOUSTON, TEXAS

TIE RODS & NUTS			SPACERS		
NO.	SIZE	LENGTH	NO.	SIZE	LENGTH
4	1/2"φ	20'-7 1/4"	4	1/2"φ	3'-6"
6	1/2"φ	23'-4"	8	3/4"φ	2'-8 1/4"

FABRICATION DETAIL - BUNDLE ASSEMBLY					
MADE DLT			DATE 12/17/94		
CHGD FM			DATE 1-25-95		
APVD SM			DATE 1-25-95		
REFERENCE: 94062					
NO. 94061					
SHEET 12					

REVISIONS
1 REVERSED BUNDLE TAPPING
DLT/12-21-95
2 ADDED SLIDE RAILS
DLT/5-8-95

PHILLIPS SUMIKA POLYPROPYLENE COMPANY
PASADENA, TEXAS
M.W. KELLOGG P.O. NO. 6014-02D1-C210-01
ITEM NO. PS-2001-220000-41-5006
3RD REACTOR 1ST GAS COOLER
MANUFACTURER'S SERIAL NO. 9461
WTT #41001029

5006

5006