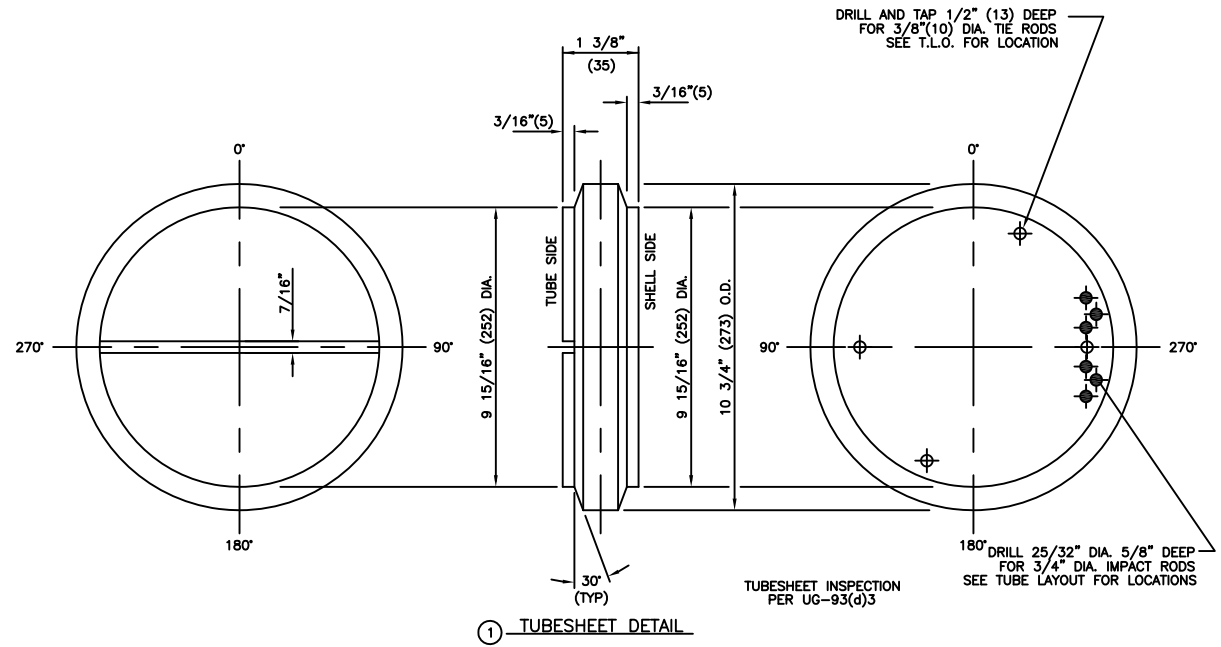
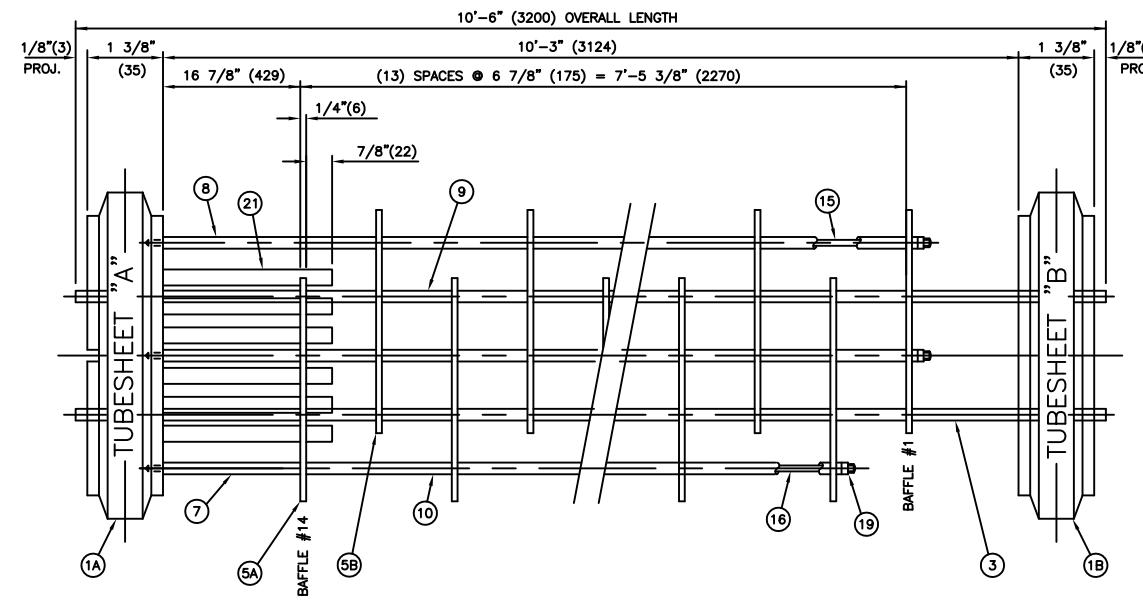


METRIC DIMENSIONS ARE IN BRACKETS



① TUBESHEET DETAIL



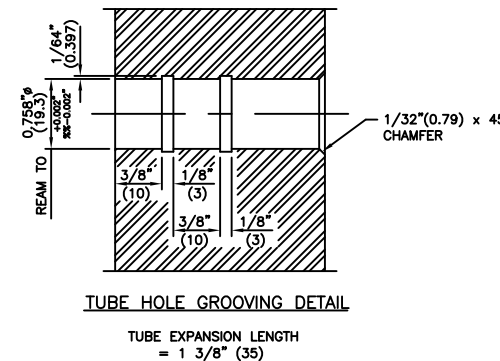
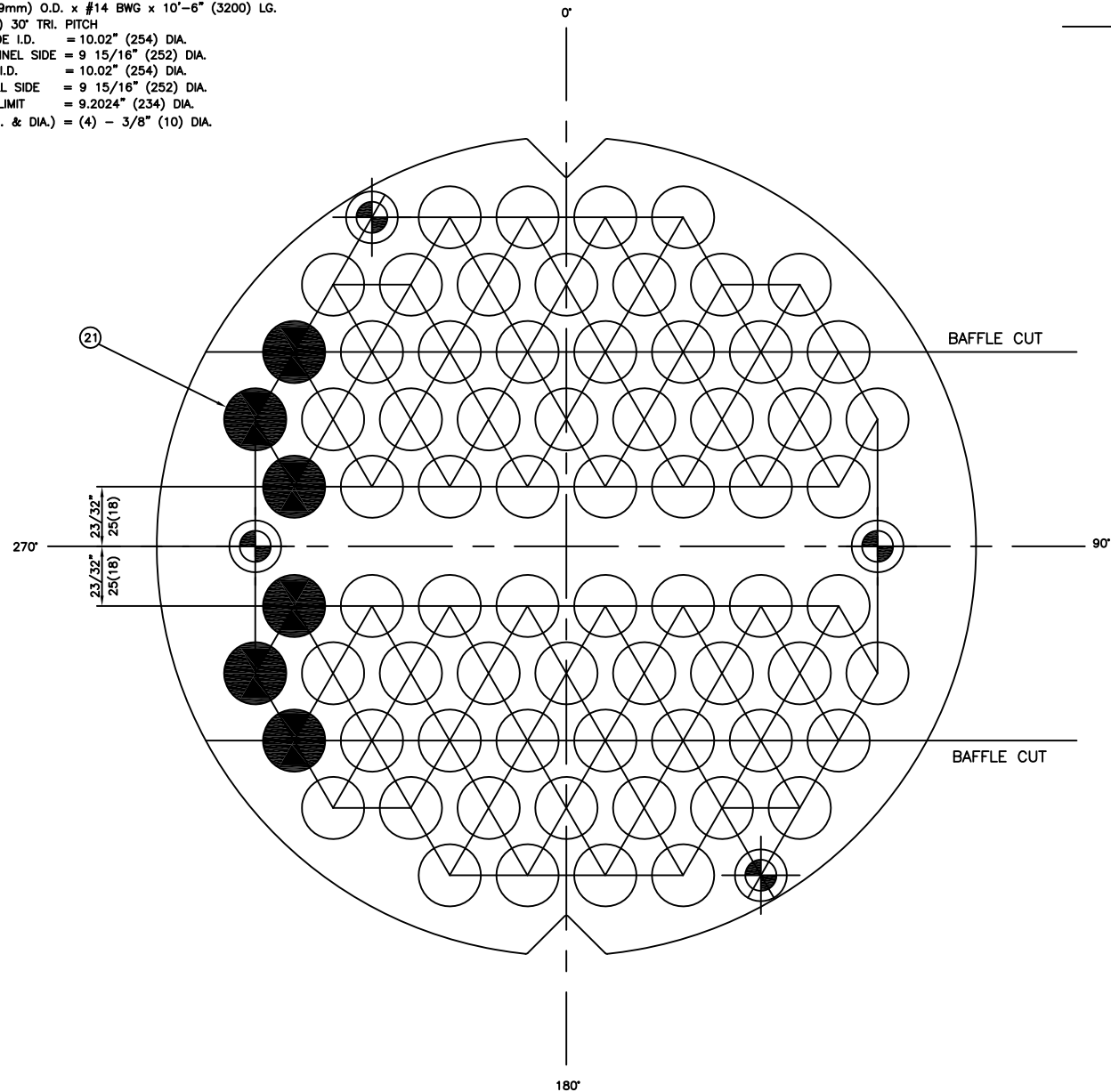
TACK WELD ITEM #21 TO TSHT "A" & BAFFLE #14. WPS CX-3

BUNDLE ASSEMBLY (SIDE VIEW)

BILL OF MATERIAL				
ITEM	QTY.	DESCRIPTION	MATERIAL	P.O.#
PLATE				
1	2	1 3/8" PL x 10 3/4" DIA. TUBESHEET	SA-516-70N	
2	-	-	-	
TUBES				
3	86	3/4" DIA. x #14 BWG (M/W) x 10'-6" SMLS TUBES	SA-179	
4	-	-	-	
BAFFLES				
5	14	1/4" PL x 9 7/8" O.D. BAFFLES	G-44W	
6	-	-	-	
SPACERS				
7	3	5/8" DIA. x #14 BWG (M/W) x 16 7/8" LG.	SA-179/SA-214	
8	1	5/8" DIA. x #14 BWG (M/W) x 23 3/4" LG.	SA-179/SA-214	
9	26	5/8" DIA. x #14 BWG (M/W) x 6 5/8" LG.	SA-179/SA-214	
10	12	5/8" DIA. x #14 BWG (M/W) x 13 1/2" LG.	SA-179/SA-214	
11	-	-	-	
12	-	-	-	
13	-	-	-	
14	-	-	-	
TIE RODS				
15	3	3/8" DIA. R.B. x 9'-1" LG. TIE ROD	H.R. STL	
16	1	3/8" DIA. R.B. x 8'-6" LG. TIE ROD	H.R. STL	
17	-	-	-	
18	-	-	-	
NUTS				
19	8	3/8" DIA. HEX NUTS	SA-325	
20	-	-	-	
MISC.				
21	6	3/4" DIA. R.B. x 18" LG - IMPACT RODS	-	
22	-	-	-	
QUANTITIES				
MATERIAL LISTED IS FOR ONE UNIT, ONE UNIT REQUIRED				
SPECIAL CHEMISTRY NOTES				
SOUR SERVICE BOTH SIDES				
PRESSURE RETAINING PLATE UT (SA-578, LEVEL B) 3" GRID, VACUUM DEGASSED, SULFIDE SHAPE CONTROL FULLY KILLED, (NOT HIC TESTED)				
BHN ≤ 200. ALL PARENT MATERIAL:				
C.E. = C + Mn/8 + (Cr + Mo + V)/5 + (Ni + Cu)/15				
PLATE: C.E. < 0.43, PHOSPHORUS ≤ 0.015%, SULPHUR ≤ 0.005%				
SA-333-6 & SA-105N: CARBON < 0.23%, MANGANESE < 1.35%, PHOSPHORUS < 0.025%, SULPHUR < 0.025%				

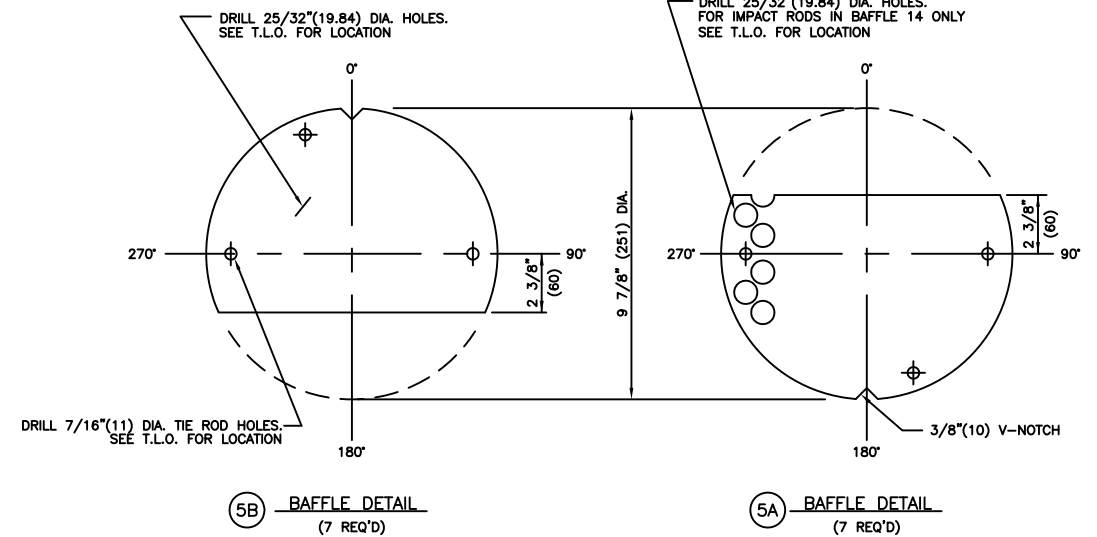
(66) 3/4" (19mm) O.D. x #14 BWG x 10'-6" (3200) LG.
 15/16" (23.8) 30° TRI. PITCH
 CHANNEL SIDE I.D. = 10.02" (254) DIA.
 RF. DIA. CHANNEL SIDE = 9 15/16" (252) DIA.
 SHELL SIDE I.D. = 10.02" (254) DIA.
 RF. DIA. SHELL SIDE = 9 15/16" (252) DIA.
 OUTER TUBE LIMIT = 9.2024" (234) DIA.
 TIE RODS (NO. & DIA.) = (4) - 3/8" (10) DIA.

TUBE LAYOUT



TUBE HOLE GROOVING DETAIL

TUBE EXPANSION LENGTH = 1 3/8" (35)



⑤B BAFFLE DETAIL (7 REQ'D)

⑤A BAFFLE DETAIL (7 REQ'D)

CONSTRUCTION / GENERAL NOTES					
NO.					
1	-				
2	-				
3	-				
4	-				
5	-				
6	-				
7	-				

REV.	BY	DESCRIPTION	REVISION RECORD	APPROVAL	DATE
2	JG	ITEM #	SEE "S" DWG.	SEE "S" DWG.	JULY 17/13
1	JG	SPECIAL CHEM.	SEE "S" DWG.	SEE "S" DWG.	JUNE 24/13
0	TR	ISSUED FOR APPROVAL	SEE "S" DWG.	SEE "S" DWG.	JUNE 7/13



CALHEX INDUSTRIES LTD.

9515 - 48th STREET S.E.
 CALGARY, ALBERTA T2C 2R1

5B1095-05-DR-70-003 Rev 2

CUSTOMER: 5 BLUE PROCESS FOR DPH-FOCUS, ENCANVA CORP SEXSMITH PLANT

PROJECT: STABILIZER FEED / BOTTOMS EXCHANGER NEN 10 x 126 ITEM#: E-1144 P.O. #: P6803-5B1095-70 SEXSMITH PLANT

ENGINEERING RECORDS
 DRAWING BY: J.GREGORY
 CHECKED BY: D.KJADNIK
 APPROVED BY: D.KJADNIK

SCALE: N.T.S.
 L.S.D. NO.:
 DWG. NO.: 13-0823-T
 REV: 2