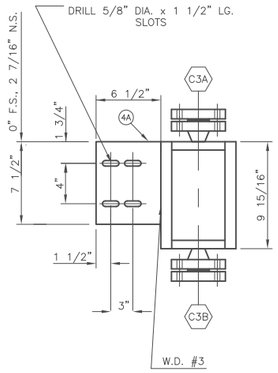
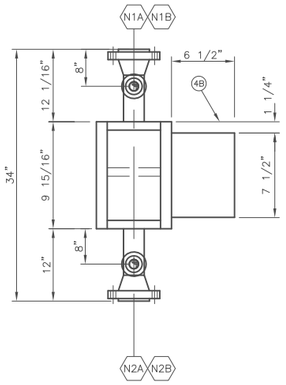
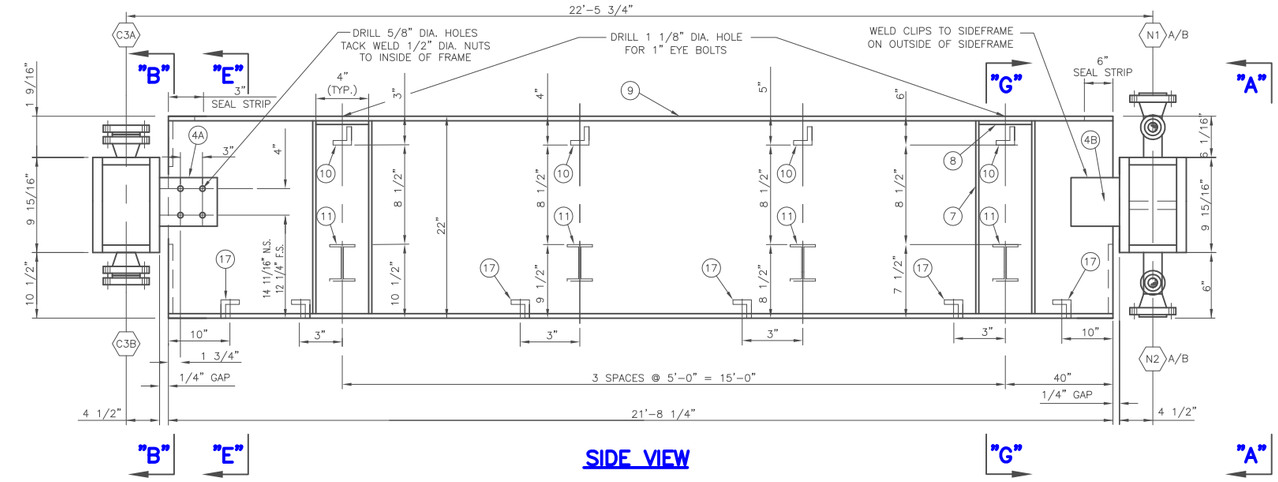


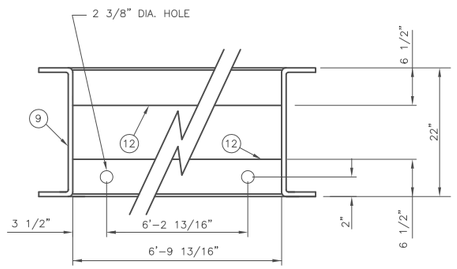
VIEW "D-D"



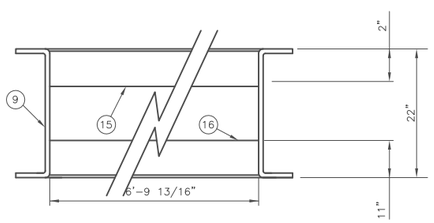
VIEW "C-C"



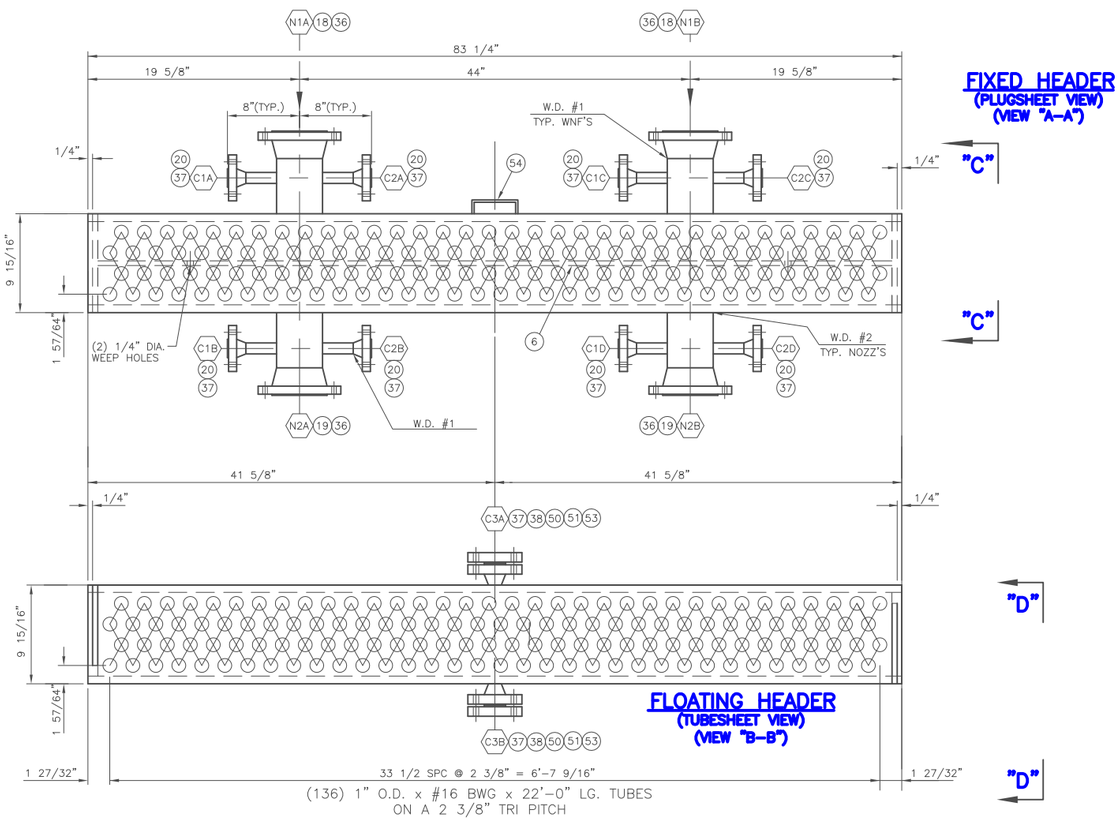
SIDE VIEW



VIEW "G-G"



VIEW "E-E"



FIXED HEADER
(PLUGSHEET VIEW)
(VIEW "A-A")

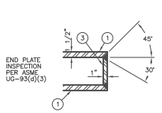
FLOATING HEADER
(TUBESHEET VIEW)
(VIEW "B-B")

BILL OF MATERIAL

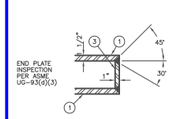
ITEM	QTY.	DESCRIPTION	MATERIAL	P.O.#
		PLATE / STRUCTURAL		
1	4	1 1/2" PL. x 9 15/16" x 6'-11 1/4" LG – TUBE & PLUG SHEET (CIT'D TO -50°F)	SA-240-31803	
2	4	1" PL. x 5 3/4" x 6'-11 1/4" LG. – WRAPPER PLATE (CIT'D TO -50°F)	SA-240-31803	
3	4	1" PL. x 5 3/4" x 7 11/16" LG. – END PLATE (CIT'D TO -50°F)	SA-240-31803	
4A/B	4	1/4" PL. x 6 1/2" x 7 1/2" LG. – HEADER CLIPS (CIT'D TO -50°F)	SA-240-31803	
5				
6	1	1/4" PL. x 6" x 6'-9 1/4" LG. – PASS PLATE (FIXED HEADER)	SA-240-31803	
7	8	3/8" PL. x 2 1/2" x 21 1/2" LG.	G-44W	
8	4	1/4" PL. x 2 1/2" x 4" LG.	G-44W	
9	2	1/4" THK. FORMED CHANNEL x 22" HI C/W 3" FLG'S x 21'-8 1/4" LG. – SIDE FRAME	G-44W	
10	4	L 2" x 2" x 1/4" THK. ANGLE x 6'-9 13/16" LG. – UPPER BRACES	G-44W	
11	4	3" I BEAM @ 5.7 #/ft. x 6'-9 13/16" LG. – MIDDLE BRACE	G-44W	
12	2	#12 GA. THK. FORMED ANGLE 6 1/2" x 6" x 6'-9 13/16" LG.	G-44W	
13				
14				
15	1	#12 GA. THK. FORMED ANGLE 2" x 3" x 6'-9 13/16" LG.	G-44W	
16	1	#12 GA. THK. FORMED ANGLE 11" x 3" x 6'-9 13/16" LG.	G-44W	
17	6	L 1 1/2" x 1 1/2" x 1/4" THK. ANGLE x 6'-9 13/16" LG. – BOTTOM BRACES	G-44W	
		PIPE / FITTINGS		
18	2	6" – SCH. XH (0.432") WELDED PIPE x 7 3/16" LG. – N1A/B (CIT'D TO -50°F)	SA-790	
19	2	6" – SCH. XH (0.432") WELDED PIPE x 7 1/8" LG. – N2A/B (CIT'D TO -50°F)	SA-790	
20	8	1" – SCH. 160 (0.250") WELDED PIPE x 2" LG. – C1A-D, C2A-D (CIT'D TO -50°F)	SA-790	
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
		TUBES		
31	136	1" O.D. x #16 BWG (A/W) x 22'-0" LG. TUBES c/w 5/8" HIGH x 10 FINS PER INCH L FOOTED ALUMINUM 1100 FINS 2" BARE ENDS	SA-789	
32			–	
33	–	–	–	
34	–	–	–	
35	–	–	–	
		ANSI FLANGES / CPLG'S		
36	4	6" – CLASS 600 RFWN FLG. (SCH XH BORE) – N1A/B, N2A/B (CIT'D TO -50°F)	SA-182F51(31803)	
37	10	1" – CLASS 600 RFWN FLG. (SCH 160 BORE) – C1A-D, C2A-D, C3A/B (CIT'D TO -50°F)	SA-182F51(31803)	
38	2	1" – CLASS 600 RF BLIND FLANGE – C3A/B (CIT'D TO -50°F)	SA-182F51(31803)	
39				
40				
41	272	1 1/8" O.D. x 1 1/2" LG. HEX SHOULDER PLUG (CIT'D TO -50°F)	SA-182F51(31803)	
42	–	–	–	
43	–	–	–	
44	–	–	–	
45	–	–	–	
46	–	–	–	
47	–	–	–	
48	–	–	–	
49	–	–	–	
		STUD BOLTS & NUTS		
50	8	5/8" DIA. x 3 3/4" LG. STUD BOLTS (ELECTRO PLATE GALVANIZED)	SA-193-B7M	
51	16	5/8" O.D. H.HEX NUTS (ELECTRO PLATE GALVANIZED)	SA-194-2HM	
		GASKETS	–	
52	272	1 3/8" O.D. x 1 1/8" I.D. x 1/16" THK. GASKET	UNS31803	
53	4	1" CLASS 600 FLEXITALLIC "CG" STYLE GASKET	T-316L	
		NAME PLATES		
54	1	6" x 6" T-BAR TYPE NAME PLATE BRACKET c/w S.S. NAME PLATE	SA-240-31803	
		SPECIAL CHEMISTRY NOTES		

QUANITIY LISTED IS FOR ONE UNIT, ONE UNIT REQUIRED

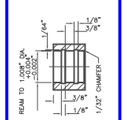
FIXED HEADER END PLATE



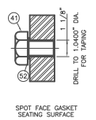
FLOATING HEADER END PLATE



TUBE HOLE DETAIL



PLUG DETAIL



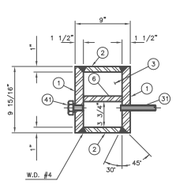
CONSTRUCTION / GENERAL NOTES

NO.	
1	PAINT: NO PAINT ON STAINLESS HEADER BOXES STRUCTURAL: (EXCEPT GRATING) SURFACE PREP: SSPC-SP-6 (COMERCIAL GRADE) PRIME:: ONE COAT OF CLOVA PRIME 21 (83021) (1.0-1.5 mils DFT) FINISH: TWO COATS MARINE ENAMEL SERIES 111 (1.0-1.5 mils DFT) COLOR: CLOVERDALE MARINE BLUE#409 GRATING: SURFACE PREP: SSPC-SP-6 (COMERCIAL GRADE) PRIME:: ONE COAT OF CLOVA PRIME 21 (83021) (1.0-1.5 mils DFT) FINISH: TWO COATS MARINE ENAMEL SERIES 111 (1.0-1.5 mils DFT) COLOR: CLOVERDALE BLACK
2	EXTERNAL DIMENSIONS, NOZZLE, SUPPORT LOCATIONS AND FABRICATION TOLERANCES SEE TEMA 2007 EDITION, SECTION 2, FIGURES F-1 AND F-2
3	HYDROTEST PRESSURE GOVERNED BY NOZZLE OPERATING STRESS RATIO

REV.	BY	DESCRIPTION	CALC. PACKAGE REV. LEVEL	REVISED CALCS. REQUIRED	APPROVAL	DATE
0	JG	ISSUED FOR APPROVAL	0	INITIAL ISSUE	MS	JUN 22/10

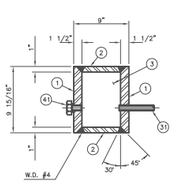
REVISION RECORD

FIXED HEADER DETAIL



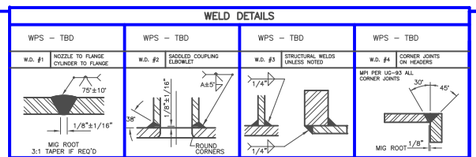
TUBE & PLUG SHEET INSPECTION PER ASME UG-93(d)(3)

FLOATING HEADER DETAIL



TUBE & PLUG SHEET INSPECTION PER ASME UG-93(d)(3)

WELD DETAILS



NOZZLE / CONNECTION SCHEDULE

REF.	QTY.	SIZE	CLASS RATING	TYPE	SERVICE	WELD SIZE A	WELD SIZE B	WELD DETAIL #	EXTERNAL PROJECT.	REPAD
N1A/B	2	6"	600#	RFWN	INLET	3/8"	---	1,2	12 1/16"	NO
N2A/B	2	6"	600#	RFWN	OUTLET	3/8"	---	1,2	12"	NO
C1A-D	4	1"	600#	RFWN	T.I.'S	3/8"	---	1,2	---	NO
C2A-D	4	1"	600#	RFWN	P.I.'S	3/8"	---	1,2	---	NO
C3A/B	2	1"	600#	RFWN	VENT/DRAIN	3/8"	---	1,2	---	NO

DESIGN DATA

DESIGN CONDITIONS			
DESIGN PRESSURE:	1377 PSIG + F.V.	9494 kPa + F.V.	
DESIGN TEMPERATURE:	205 °F	96 °C	
MIN. DESIGN METAL TEMPERATURE:	-49 °F	-45 °C	
RADIOGRAPHY:	100% XR/UT/LPI (WHERE APPLICABLE)		
STRESS RELIEVING:	N/R PER TABLE UHA-32 P-10H		
CORROSION ALLOWANCE:	0"	0 mm	
TEST PRESSURE:	1793 PSIG	12365 kPa	
WELDING PROCEDURES:	TBD (INCLD TACK WELDS)		
IMPACT TESTING:	ALL MATERIAL C.I.T.'D TO -50°F PER UG-84 TUBING MATERIAL EXEMPT PER UHA-51 GENERAL NOTE		
MAWP EQUAL TO DESIGN PRESSURE			
NO CORROSION ALLOWANCE APPLICABLE TO TUBING MATERIAL			
CODE: ASME SECTION VIII, DIV. 1, 2007 EDITION, 2009 ADD.		DESIGN: API 661	
REGISTRATION: ALBERTA & BRITISH COLUMBIA		C.R.N. #:	
		VOLUME: 16.194 CU.FT. / 0.459 CU.M.	
SHIPPING WEIGHT (DRY): 7500 LBS / 3402 KGS		TEST WEIGHT : 8550 LBS / 3878 KGS	
HEATING SURFACE: 793.077 SQ. FT. / 73.679 SQ.M. (BARE)			
REGISTERED QUALITY CONTROL PROCEDURES AQP 1386		REGISTERED WELDING PROCEDURES WP 2380.2	

CALHEX INDUSTRIES LTD.
9515 – 48th STREET S.E.
CALGARY, ALBERTA T2C 2R1

CUSTOMER: TG ENGINEERING INC.
FOR
DEVON CANADA COPR.

PROJECT: SOUR WELL GAS COOLER
(1) 6.88 x 22 x 4RF TAG#: AC-001
P.O. # FAC-100189
DEVON KOPMIE PH II WELLSITES

ENGINEERING RECORDS	NAME	DATE
DRAWING BY:	J.GREGORY	JUNE 15/10
CHECKED BY:	D.KLADNIK	JUNE 15/10
APPROVED BY:	M.SOJKA	

SCALE: N.T.S.

L.S.D. NO.: –

DWG. NO.: 10-0562-C

REV.: 0