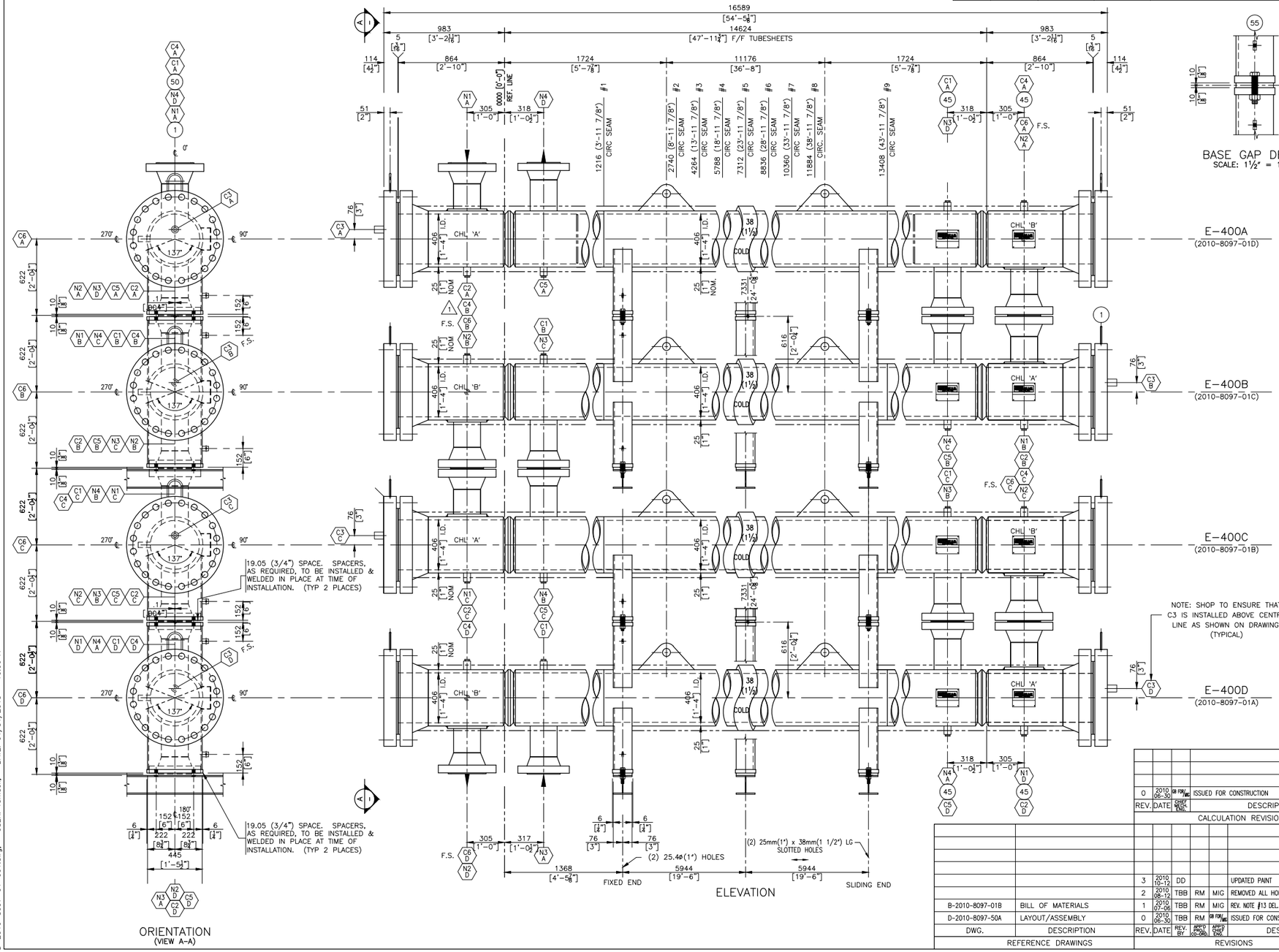
NOZZLE SCHEDULE

MARK	SIZE (NPS)	RATING (CL)	TYPE	SERVICE	NOZZLE BORE	REPAD	PROJ'N I/S	PROJ'N O/S	WELD DETAIL	WELD SIZE A	WELD SIZE B	WELD SIZE C	WELD SIZE D	REMARKS
N1A	219.08(8")	900	RTJWN	(TUBESIDE) INLET		51(2") x 15.9(5/8")	SET FLUSH							
N1B–D	219.08(8")	900	RFWN	(TUBESIDE) INLET		51(2") x 15.9(5/8")	SET FLUSH							
N2A–C	219.08(8")	900	RFWN	(TUBESIDE) OUTLET		51(2") x 15.9(5/8")	GRIND FLUSH							
N2D	219.08(8")	900	RTJWN	(TUBESIDE) OUTLET		51(2") x 15.9(5/8")	GRIND FLUSH							
N3A–D	219.08(8")	600	RFWN	(SHELLSIDE) INLET			GRIND FLUSH							
N4A–D	219.08(8")	600	RFWN	(SHELLSIDE) OUTLET			GRIND FLUSH							
C1A–D	33.4(1")	6000	LONG CPLG	SHELLSIDE VENT c/w PLUG			GRIND FLUSH							
C2A–D	33.4(1")	6000	LONG CPLG	TUBESIDE DRAIN c/w PLUG			GRIND FLUSH							
C3A–D	33.4(1")	6000	LONG CPLG	GLYCOL INJECTION			SET ON							
C4A–D	33.4(1")	6000	LONG CPLG	TUBESIDE VENT c/w PLUG			SET FLUSH							
C5A–D	33.4(1")	6000	LONG CPLG	SHELLSIDE DRAIN c/w PLUG			GRIND FLUSH							
C6A–D	26.7(3/4")	6000	LONG CPLG	PI c/w PLUG			SET FLUSH							



DESIGN DATA

M.A.W.P.: T.S.: 12514 kPAG @ 66°C / S.S.: 9756 kPag @ 66°C (T.S.: 1815 PSIG @ 150°F / S.S.: 1415 PSIG @ 150°F)	M.D.M.T.: T.S.: -28.9°C @ 12514 kPag / S.S.: -28.9°C @ 9756 kPag (T.S.: -20°F @ 1815 PSIG / S.S.: -20°F @ 1415 PSIG)
RADIOGRAPHY: UW-11(a) NOZZLE BUTTWELDS: 100%	LONG'L JOINT EFF.: T.S.100% / S.S.100%
P.W.H.T.: NONE	CORROSION ALLOWANCE: TUBES: NIL, T.S.: & S.S.: 1.6mm; TUBES: NIL, T.S.: & S.S.: (1/16")
HYDROTEST: T.S.: 18768 kPag / S.S.: 14635 kPag (T.S.: 2722 PSIG / S.S.: 2123 PSIG)	TUBE SHEET: SA-516-70N: 76.2mm MIN; SA-516-70N: (3.0" MIN)
HEADS: SA-105N: 101.6mm MIN; SA-105N: (4.0" MIN)	FLANGES: SA-105N
SHELL: SA-516-70N:T.S. & S.S. 25.4mm NOM THK; SA-516-70N:(T.S. & S.S. 1.000" NOM THK)	NOZZLES: SA-106-B
WELD FITTINGS: SA-234-WPB	STUDS: SA-193-B7
COUPLINGS (T.O.L.): SA-105N	NUTS: SA-194-2H
INTERNALS: SA-516-70	MISC. PLATE: SA-516-70
SHIPPING WT.: 43 350 kg (EMPTY); (95 370 lbs) (EMPTY)	CAPACITY: T.S.: 0.9 m3 / S.S.: 7.5 m3; (T.S.: 31.8 ft3 / S.S.: 265.2 ft3)
TESTING WT.: 51 774 kg (FULL OF WATER); (113 903 lbs) (FULL OF WATER)	TUBES: SA-179 14 BWG 2.1 (0.083) MIN SMLS
SURFACE PREPARATION: COMMERCIAL SANDBLAST TO SSPC-SP6	
3 PAINT: PRIMER: 1-2 mils 83003 CLOVAZINC ORGANIC ZINC; FINISH: 3-5 mils 831150 CLOVAGUARD HIGH BUILD EPOXY. 3-4 mils 83400 CLOVATHANE URETHANE (COLOUR - WHITE)	
INSULATION: 38.1mm (1 1/2") CELLULAR FOAM GLASS w/ 25-H14 SMOOTH ALUMINUM CLADDING & POLYVINYL FLUORIDE EXTERIOR COATING.	
DUTY: 1489 kW/HR (5 082 503 BTU/HR)	HEATING SURFACE: 755 m2 (8127 ft2)
C.R.N.: R3919.2	SERIAL NO.: 2010-8097-01A/B/C/D

NOTES

1. ALL BOLTS TO STRADDLE NATURAL VESSEL CENTRE LINES.
2. ALL BOLTING TO BE HOT DIP GALVANIZED PER ASTM A53.
3. ALL REPADS TO HAVE TWO (1/8") NPT WEEPHOLES 180° APART AND FILLED WITH GREASE AFTER AIR/SOAP SUD TEST AT 150 KPAG (22 PSIG).
4. PROTECT ALL OPENINGS FOR SHIPMENT.
5. IMPACT TEST: - EXEMPT PER UG-20(f).
   - FLANGES EXEMPT PER UCS-66(c).
   - STUDS AND NUTS EXEMPT PER UCS-66 NOTE (e).
   - TUBESHEETS EXEMPT PER UCS-66(a) & UG-20(f).
6. EXTERNAL LOADS PER UG-22 ARE NOT APPLICABLE.
7. ALL INTERNAL & EXTERNAL NOZZLE CORNERS ARE TO BE CHAMFERED TO 1.6 (1/16") OR ROUND TO 3.2 (1/8") RADIUS.
8. USE 6 (1/4") FILLET FOR MISCELLANEOUS WELDS UNLESS SPECIFIED OTHERWISE ON THE DRAWING.
9. ALCO STANDARD FABRICATION TOLERANCES (DWG #A-4540).
10. VESSEL TO BE REGISTERED IN ALBERTA.
11.
12. CHART RECORD HYDROTEST FOR 60 MINUTES.
13. ITEM #80 TO BE SEAL WELDED TO ONE SADDLE ONCE FINAL FIT-UP HAS BEEN COMPLETED.
14. MEETS THE REQUIREMENTS OF TEMA 'C'.

C.R.N. STAMP

TUBE SIDE: UW-11(a) SEC. VIII, DIV. 1, 2007 EDITION, 2009b ADDENDA; W; RT-1; –; –

SHELL SIDE: UW-11(a) SEC. VIII, DIV. 1, 2007 EDITION, 2009b ADDENDA; W; RT-1; –; –

ONE (1) UNIT REQUIRED

REV.	DATE	CHKD BY	ENG.		DESCRIPTION
0	2010 06-30	GB	RM	MIG	ISSUED FOR CONSTRUCTION

CALCULATION REVISIONS

DWG.	DESCRIPTION
B-2010-8097-01B	BILL OF MATERIALS
D-2010-8097-50A	LAYOUT/ASSEMBLY

REFERENCE DRAWINGS

REV.	DATE	REV. BY	APPD. CO-ORD.	APPD. ENG.	DESCRIPTION
3	2010 10-12	DD			UPDATED PAINT
2	2010 08-12	TBB	RM	MIG	REMOVED ALL HOLDS
1	2010 07-06	TBB	RM	MIG	REV. NOTE #13 DEL. NOTE #11, NOZZLE TAG N4B
0	2010 06-30	TBB	RM	MIG	ISSUED FOR CONSTRUCTION

REVISIONS

DRAWN	TBB
DATE	2010-06-28
SCALE	3/4"=1'-0"
CHK'D	KRT

ALCO GAS & OIL PRODUCTION EQUIPMENT LTD.

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12514 kPag (1815 PSIG) (TS)/9756 kPag (1415 PSIG) (SS) + 1.6mm (1/16") CA
406-14630 (16-576) NEN HORIZ. GAS/GAS EXCHANGER
TAG: E-400

LOCATION: SONGO SONGO ISLAND, TANZANIA — PO# 064/2010

CUSTOMER: PANAFRICAN ENERGY TANZANIA LIMITED

DWG/SHOP ORDER: D-2010-8097-01-001/002 — REV. 3

D-2003-6974-06-001/002

D-2010-8097-01-001.dwg, USER: Tumack, DATE: 01/31/2013 – 10:06 A