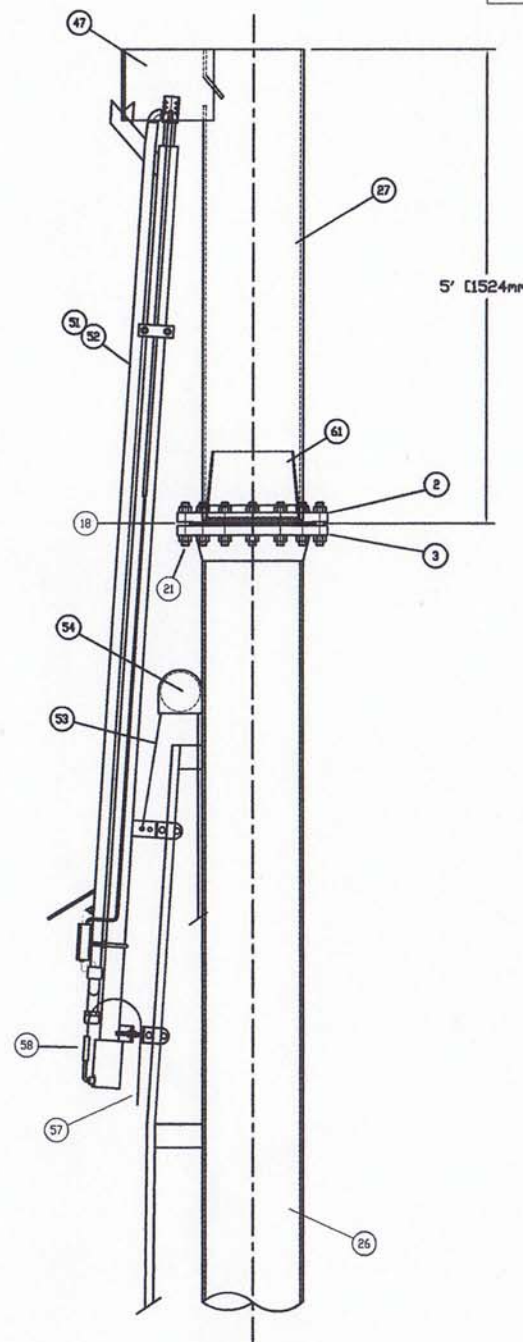
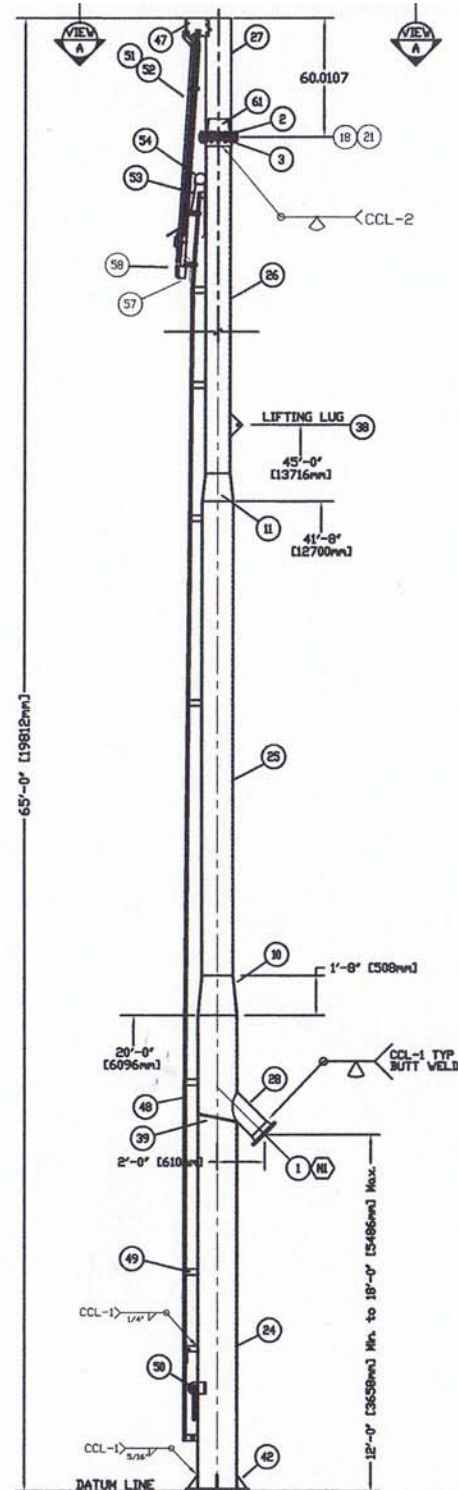
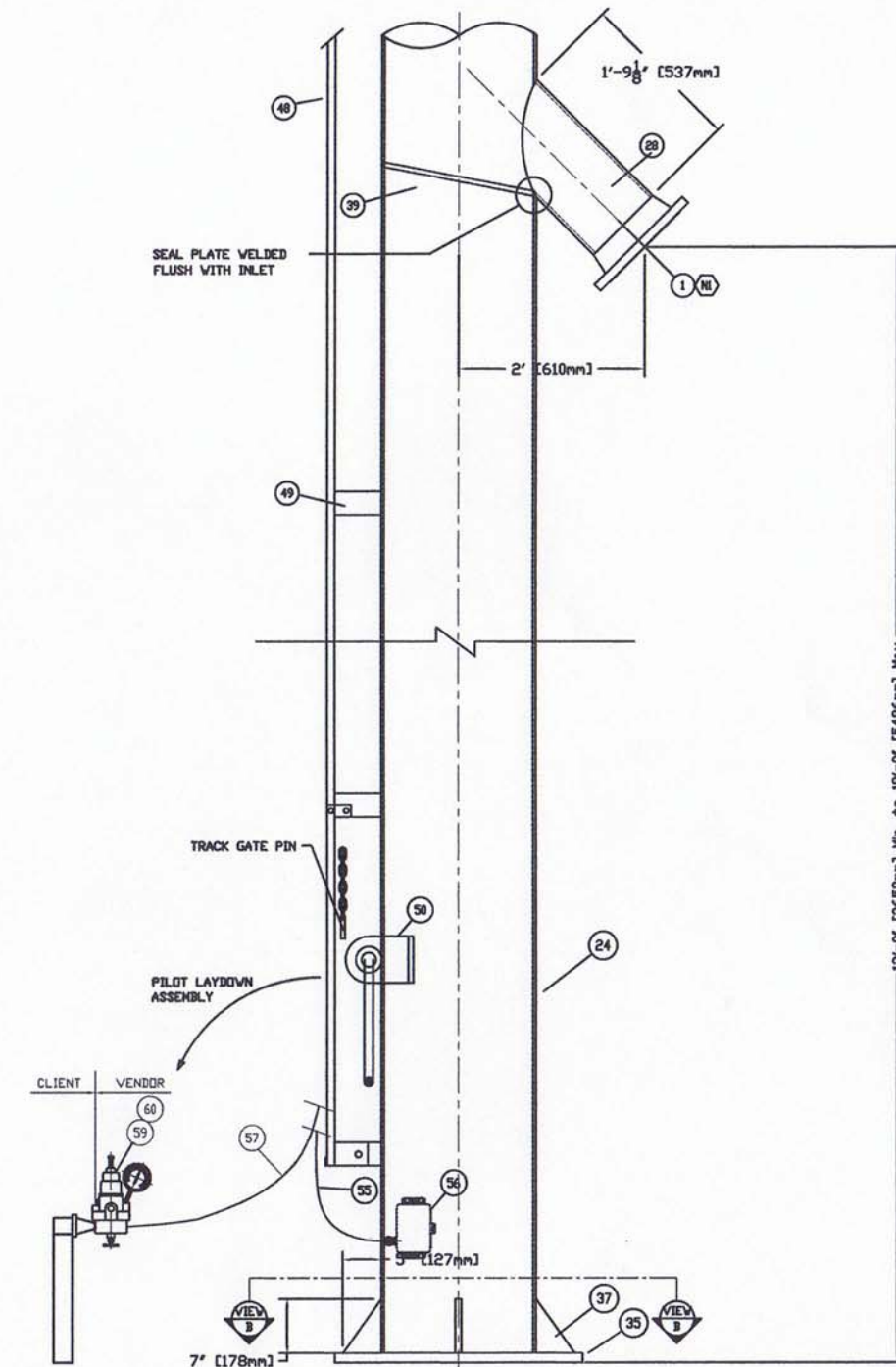
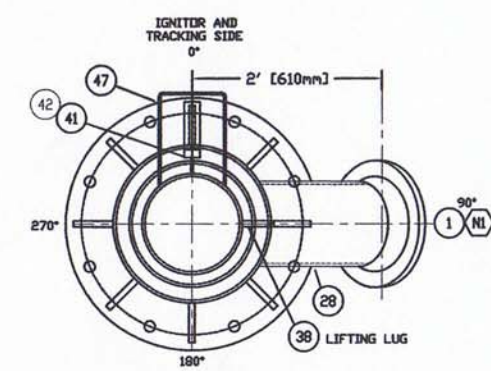




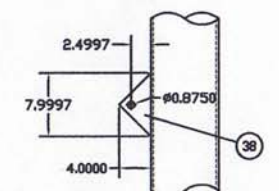
PILOT & TIP DETAIL



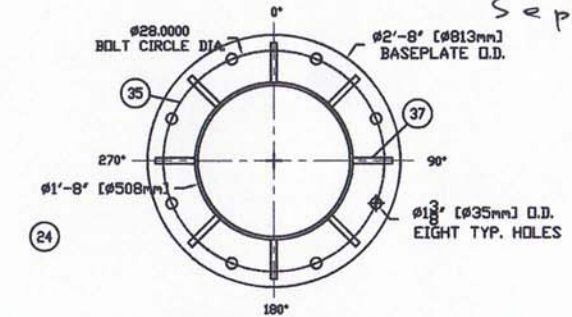
INLET & BASE DETAIL



INLET & PILOT ORIENTATION (VIEW 'A-A')



LIFTING LUG DETAIL



BASEPLATE DETAIL (SECTION 'B-B')



Aris Aligizakis
Sept. 4, 2013

Attachment page #9. (Stamped and signed drawing part of the engineering report).

Reviewed and re-evaluated for APEGBC stamping on September 4, 2013

Rev.	Description	By	Y	M	D	General Notes:	Tag #:	Paint:	Ignition System	Dwg. By:	DWG#:	Title:	Customer:	P.O.#	REV.
2	AS BUILT DRAWING FOR STRUCTURAL	JJC	11	03	29	1. PAINT: FRESH COLOR NO-GLOSS BLACK. 2. WELD PENETRANT ON STAINLESS TO CORROSION FILLET WELDS ON TIP SLIP-ON FLANGE.	VARIES	SANDBLAST SSPC-SP6 ENDURA 521 3-5 MILS DFT ENDURA EX-2C 1.5-2.5 MILS DFT	FLARETECH RETRACTABLE PILOT MODEL: FT-RP1 c/w PILOT MONITORING & IGNITION FT-PMI-12	JJC	11-1010GA	Ø12" x 65'-0" TALL SELF SUPPORTED UTILITY FLARE STACK c/w Ø10" INLET CONN.	MURPHY OIL COMPANY LTD. c/o EQUINOX ENGINEERING	54096129-832	2
1	APPROVED FOR CONSTRUCTION	JC	11	03	28	Approx. Weight: 4273 LBS.		Moment At Foundation Base: 49493 FT-LBS		Date:	2011 03 18				
0	ISSUED FOR APPROVAL	JJC	11	03	18	FLARETECH INC. Any Technical Data and the Design Disclosed Herein are the Exclusive Property of FlareTech Inc. and/or Contain the Proprietary Rights of Others and are not to be used or disclosed to Others without the Written consent of FlareTech Inc.		Mag Particle Procedure: LOAD BEARING FILLET WELDS		Salesperson:	JOHN CASSIDY				
								Radiography / Xray: 100% BUTT WELDS IN CONTACT WITH WASTE GAS		JOB#:	QUOTE#:				
								Coolant Tracing: NO		11-1010	JC10-ST234-1				
								Aluminum Cladding: NO		Sheet 1 of 2					
								Corrosion Allowance: 3.2mm							
								Weld Procedure #: #3018.2							
								Q.C. Program #:							



Bill of Materials

No	Qty	Size	Sch.	Rating	Face	Type	Material Specification	Remarks	Heat#
1	1	ø10"[273]	STD.	150#	R.F.	W.N.	ANSI SA105N	N1 - HP FLARE GAS INLET CONN.	
2	1	ø12"[324]		150#	R.F.	S.O.	ANSI SA105N	TIP BREAK FLANGE	
3	1	ø12"[324]	STD.	150#	R.F.	W.N.	ANSI SA105N	RISER BREAK FLANGE	
4									
5									
6									
7									
8									
9									
WELD FITTINGS									
10	1	ø20"xø16"	STD.				SA 234 WPB	CONCENTRIC REDUCER	
11	1	ø16"xø12"	STD.				SA 234 WPB	CONCENTRIC REDUCER	
12									
13									
14									
COUPLINGS									
15									
16									
17									
GASKETS									
18	1	ø12"[324]	1/8"	150#			316L S.S./ GRAFOIL	TIP BREAK FLANGES	
19									
20									
PIPE									
21	12	12	1	7/8"[22]	4.75"[121]		SA193 B7M	2.3,18	
22									
23									
PIPE									
24	1	ø20"[508]	SMLS	STD.			SA106B x 20'-0"[6096mm] LG.	LOWER SECTION WASTE GAS RISER	
25	1	ø16"[406]	SMLS	STD.			SA106B x 20'-0"[6096mm] LG.	MIDDLE SECTION WASTE GAS RISER	
26	1	ø12"[324]	SMLS	STD.			SA106B. x 16'-8 1/4"[5086mm] LG.	UPPER SECTION WASTE GAS RISER	
27	1	ø12"[324]	TP 312	STD.			316L S.S. x 4'-11 1/2"[1511mm] LG.	HP WASTE GAS TIP	
28	1	ø10"[273]	SMLS	STD.			SA106B x 1'-9 1/8"[537mm] LG.	N1 - WASTE GAS INLET NOZZLE EXT.	
29									
30									
31									
32									
33									
34									
PLATE & MISCELLANEOUS									
35	1	ø32"[813mm]	O.D.				1 1/4" THK. SA36 CS PLATE	BASEPLATE	
36									
37	8	5" x 7"[127 x 178]					3/4" THK. SA36 CS PLATE	BASEPLATE GUSSETS	
38	1	8" x 4"[203 x 102]					3/4" THK. SA36 CS PLATE	LIFTING LUG	
39	1	ø19"[483mm]					3/8" THK. SA36 CS PLATE	SEAL PLATE	
40									
41									
42									
43									
44									
45									
46									
47	1	8" x 9"[203 x 229]					1/4" THK. 316L S.S. PLATE	PILOT WIND SHROUD	
48	LOT	2" x 1"[51 x 25]					1/8" THK. HSS TUBING	PILOT TRACKING	
49	LOT	3"[76mm] FLAT					1/4" THK. SA 36 CS PLATE	TRACKING SUPPORTS	
50	1	PILOT RETRACTING WINCH					(MANUAL)	PILOT WINCH	
IGNITION SYSTEM / MISC. PARTS									
51	1	FLARETECH RETRACTABLE FUEL GAS PILOT FT-RP1						FUEL GAS PILOT	
52	1	FLARETECH PILOT MONITORING & IGNITION SYSTEM FT-PMI-12 SOLAR						RELIGHT SYSTEM	
53	1	ø3/16" S.S. IGNITOR RETRACTING PULLEY CABLE X 125' LG.						PULLEY CABLE	
54	1	IGNITOR RETRACTING ENCLOSED SS PULLEY						PILOT PULLEY	
55	1	#16-4 S.O.O.W. ELECTRICAL CABLE X 60' LG.						ELECTRICAL CABLE	
56	1	NEMA 4 STEEL ELECTRICAL JUNCTION BOX						JUNCTION BOX	
57	1	ø1/4" NPT FLEXIBLE FUEL SUPPLY HOSE X 62' LG.						FUEL HOSE	
58	1	ø1/4" NPT INLINE HIGH PRESSURE FUEL FILTER						FUEL FILTER	
59	1	ø1/4" NPT BELOFRAM T50 REGULATOR						REGULATOR	
60	1	ø1/4" NPT, 2" DIAL FACE, 0-200 kPa (0-30 PSI) CS LIQUID FILL GAUGE						GAUGE	
61	1	FLARETECH 12" WELD-IN DYNAMIC SEAL (304 S.S.)						PURGE REDUCER	
62									
63									

Sept. 4, 2013

2 AS BUILT DRAWING FOR STRUCTURAL JJC 11 03 29

1 APPROVED FOR CONSTRUCTION JJC 11 03 28

0 ISSUED FOR APPROVAL JJC 11 03 18

Rev. Description By Y M D

General Notes:
1. PAINT FINISH COLOR HI-GLOSS BLACK
2. DYE PENETRANT ON STAINLESS TO CARBON FILLET ON TIP FLANGE

Tag #: VARIES

Approx. Weight: 4273 LBS.

Attachment page #10.
(BOM in compliance with the attached engineering study).

Paint: SANDBLAST SSPC-SP6
ENDURA 521 3-5 mils DFT
ENDURA EX-2C 1.5-2.5 mils DFT

Ignition System: FLARETECH RETRACTABLE PILOT
MODEL: FT-RP1 c/w PILOT
MONITORING & IGNITION FT-PMI-12

Moment At Foundation Base: 40493 FT-LBS

Mag Particle Procedure: LOAD BEARING FILLET WELDS

Radiography / Xray: 100% BUTT WELDS IN CONTACT WITH WASTE GAS

Coolant Tracing: NO

Aluminum Cladding: NO

Corrosion Allowance: 3.2 mm

Weld Procedure #: 3018.2

Q.C. Program #:

Dwg. By: JJC DWG#: 11-1010BDM

Date: 2011 03 18 Y M D

Salesperson: JOHN CASSIDY

JOB#: QUOTE#: 11-1010 JC10-ST234-1

Sheet 2 of 2

Title: ø12" x 65'-0" TALL SELF SUPPORTED UTILITY FLARE STACK c/w ø10" INLET CONN.

Customer: MURPHY OIL COMPANY LTD.
c/o EQUINOX ENGINEERING

P.O.#: 54096129-832

LSD: VARIES TUPPER WEST GGS

REV.

FLARETECH INC.

PHONE# (403)742-2212

FAX: 403-742-2214