

PUMP DETAILS AT TIKRIKALAN TERMINAL

S N	Description	Road Tanker Loading Pumps				Sump Pumps (Vertical)-DOL STARTER				
		HSD (VFD)	MS (VFD)	SKO (VFD)	Ethanol (Loading + Unloading)	Slop	MS	HSD	SKO	Ethanol
1	Product									
2	Discharge lpm)	7200	5600	2400	900	300	300	300	300	300
3	Head of pump	45	45	45	45	39	39	39	39	44
4	RPM	1450	1450	1450	2900	2900	2900	2900	2900	2900
5	NPSHA	6	4	5	4.5	4	4	4	4	4
6	NPSHR	3.2	2.5	1.8	2.9	1.7	1.7	1.7	1.7	1.7
	Efficiency	80	80	68	69	47	50	47	49	50
7	Type	Hor	Hor	Hor	Hor	Vertical	Vertical	Vertical	Vertical	Vertical
8	BKW at shaft	55.32	37.52	21.02	7.67	3.4	2.79	3.4	3.16	3.45
9	Motor Rating	75	45	30	9.3	5.5	3.7	5.5	5.5	5.5
10	Suction (mm)	200	200	125	80	80	200	65	65	65
10	Delivery (mm)	150	150	100	50	50	150	40	40	40
11	No. of pumps	3W+1S	3W+1S	1W+1S	2W+1S	1	1	1	2	1
12	Motor Starter	VFD/Soft Starter								
13	ARV Make	HORA	HORA	HORA	HORA					
14	Inlet Port	8"	8"	4"	3"					
15	Outlet Port	8"	8"	4"	3"					
16	Bypass	4"	4"	3"	1.5"					
17	Min. flow (KL/hr)	80	80	30	12					
18	Head at min flow(m)	53.5	49	53	52					

PUMP TAG NOS AT TIKRIKALAN TERMINAL						Pr. Transmitter	Pr.Gauge
S.N	TAG NO	PRODUCT	CAP.(LPM)	HEAD (M)	TYPE		
1	T-H-H-001(P1)	ULHSD	7200	45	HORIZONTAL	1	1
2	T-H-H-002(P2)	ULHSD	7200	45	HORIZONTAL		1
3	T-H-H-003(P3)	ULHSD	7200	45	HORIZONTAL		1
4	T-H-H-004(P4)	ULHSD	7200	45	HORIZONTAL		1
5	T-H-M-005(P5)	ULMS	5600	45	HORIZONTAL	1	1
6	T-H-M-006(P6)	ULMS	5600	45	HORIZONTAL		1
7	T-H-M-007(P7)	ULMS	5600	45	HORIZONTAL		1
8	T-H-M-008(P8)	ULMS	5600	45	HORIZONTAL		1
9	T-H-M-009(P9)	SKO	2400	45	HORIZONTAL	1	1
10	T-H-M-010(P10)	SKO	2400	45	HORIZONTAL		1
11	T-H-E-011 (P11)	ETHANOL	900	45	HORIZONTAL	1	1
12	T-H-E-012 (P12)	ETHANOL	900	45	HORIZONTAL		1
13	T-H-E-013 (P13)	ETHANOL	900	45	HORIZONTAL		1
14	T-V-H-014 (P14)	ULHSD	300	35	VERTICAL	1	1
15	T-V-M-015 (P15)	ULMS	300	35	VERTICAL	1	1
16	T-V-S-016 (P16)	SKO	300	35	VERTICAL	1	1
17	T-V-S-017(P17)	SKO	300	35	VERTICAL	1	1
18	T-V-E-018 (P18)	ETHANOL	300	40	VERTICAL	1	1
19	T-V-I-019 (P19)	SLOP	300	35	VERTICAL	1	1
20	FW PUMP-1	FIRE WATER	550KL/HR	105	HOR. ENGINE DRIVEN	2	2
21	FW PUMP-2	-DO-	550KL/HR	105			
22	FW PUMP-3	-DO-	550KL/HR	105			
23	JOCKEY PUMP-1	-DO-	35KL/HR	105	HOR. MOTOR DRIVEN		
24	JOCKEY PUMP-2	-DO-	35KL/HR	105			

Note: Local Control Panel for Fire Water Pump and LCS for balance all pumps shall be provided by owner.

TANK TRUCK GANTRY SCHEDULE AT TIKRIKALAN TERMINAL

BAY NUMBER	LOADING ARM 1	LOADING ARM 2	ADDITIVE/BLENDING
1	MS	MS	Power, Ethanol
2	MS	MS	Power, Ethanol
3	MS	MS	Power, Ethanol
4	MS	MS	Power, Ethanol
5	MS	MS	Power, Ethanol
6	MS	MS	Power, Ethanol
7	MS	MS	Power, Ethanol
8	MS	HSD	Power, Ethanol, Turbo
9	MS	HSD	Power, Ethanol, Turbo
10	HSD	HSD	Turbo
11	HSD	HSD	Turbo
12	HSD	HSD	Turbo
13	HSD	HSD	Turbo
14	HSD	HSD	Turbo
15	HSD	HSD	Turbo
16	HSD	HSD	Turbo
17	HSD	HSD	Turbo
18	HSD	HSD	Turbo
19	SKO	HSD	Turbo +BLUE DYE
20	SKO	HSD	Turbo

TANK AND MOV DETAIL- TIKRIKALAN TERMINAL

TANK NO	DIA(M)	HT/ Length(M)	TYPE	PRODUCT	CAPACITY (KL)	MOTOR OPERATED VALVE(TAG)				
						INLET	OUTLET	RE- CIR	PUMP SUCTION HEADER	DISCHARGE HEADER
TK-1	25	13	A/G, FRV	ULHSD	5640	201	202	203	210	211
TK-2	25	13	A/G, FRV	ULHSD	5640	204	205	206		
TK-3	25	13	A/G, FRV	ULHSD	5640	207	208	209		
TK-4	14	10.5	A/G, FRV	SKO	1385	301	302	303	307	308
TK-5	14	10.5	A/G, FRV	SKO	1385	304	305	306		
TK-6	22	13	A/G, FRV	ULMS	4370	101	102	103	110	111
TK-7	22	13	A/G, FRV	ULMS	4370	104	105	106		
TK-8	22	13	A/G, FRV	ULMS	4370	107	108	109		
TK-9	12	13	A/G, CRV	ETHANOL	1240	401	402			
TK-10	12	13	A/G, CRV	ETHANOL	1240	403	404			
TK-11	3	10.5	U/G	ULHSD	70					
TK-12	3	10.5	U/G	SKO	70					
TK-13	3	10.5	U/G	SKO	70					
TK-14	3	10.5	U/G	MS	70					
TK-15	3	10.5	U/G	INTERFACE	70					
TK-16	3	10.5	U/G	ETHANOL	70					
TK-17	16	13	A/G, OT	WATER	2400					
TK-18	16	13	A/G, OT	WATER	2400					

I. SIGNAL FROM TAS PLC TO PIPELINE PLC THROUGH SERIAL COMMUNICATION LINK (RS 485,MODBUS) FOR STATUS INFORMATION

S.N	LOCATION	PRODUCT	MOV NUMBER			STATUS SIGNAL	TANK LEVEL SIGNAL
			INLET	OUTLET	RE-CIR		
1	TK1	HSD	201	202	203	OPEN/CLOSE	LT CONTINUOUS, LAH, LAHH
2	TK2	HSD	204	205	206	OPEN/CLOSE	LT CONTINUOUS, LAH, LAHH
3	TK3	HSD	207	208	209	OPEN/CLOSE	LT CONTINUOUS, LAH, LAHH
4	TK4	SKO	301	302	303	OPEN/CLOSE	LT CONTINUOUS, LAH, LAHH
5	TK5	SKO	304	305	306	OPEN/CLOSE	LT CONTINUOUS, LAH, LAHH
6	TK6	MS	101	102	103	OPEN/CLOSE	LT CONTINUOUS, LAH, LAHH
7	TK7	MS	104	105	106	OPEN/CLOSE	LT CONTINUOUS, LAH, LAHH
8	TK8	MS	107	108	109	OPEN/CLOSE	LT CONTINUOUS, LAH, LAHH
9	TK12	U/G SKO					LT CONTINUOUS, LAH, LAHH
10	TK15	U/G SLOP					LT CONTINUOUS, LAH, LAHH

II FIRE FIGHTING SYSTEM

S.N	LOCATION	PRODUCT	INSTRUMENT	STATUS SIGNAL
1	TK-17	WATER	LT	CONTINUOUS
2	TK-18	WATER	LT	CONTINUOUS
3	FW HEADER	WATER	PT	CONTINUOUS

III CONTROL SIGNAL TO TAS PLC FROM PIPELINE PLC THRU HARDWIRED (CABLE) OUTPUTS FROM PIPELINE PLC

S.N	LOCATIO N	PRODUC T	MOV NUMBER		CONTROL SIGNAL
			INLET		
1	TK1	HSD	201		OPEN/CLOSE
2	TK2	HSD	204		OPEN/CLOSE
3	TK3	HSD	207		OPEN/CLOSE
4	TK4	SKO	301		OPEN/CLOSE
5	TK5	SKO	304		OPEN/CLOSE
6	TK6	MS	101		OPEN/CLOSE
7	TK7	MS	104		OPEN/CLOSE
8	TK8	MS	107		OPEN/CLOSE

IV OTHER OUTPUT SIGNALS HARDWIRED BETWEEN TERMINAL & P/L

1	P/L ESD				
2	TML ESD				
3	TAS FAP				
4	PL FAP				