






OGDCL PAKISTAN:
OIL & GAS DEVELOPMENT
COMPANY LIMITED

KPD-TAY COMPRESSION PROJECT

RE-ISSUED FOR TENDER

1	25-FEB-2022	RE-ISSUED FOR TENDER	JAB	ZHW	AIB	MPM	MAS			
0	07-JAN-2022	ISSUED FOR TENDER	JAB	ZHW	AIB	MPM	MAS			
REV	DATE	DESCRIPTION	ORIG	CHKD	LE	QA	PM	LPE/TA		
REVISIONS			APPROVAL					OWNER APPROVAL		
<div></div> <div>ENAR PETROTECH SERVICES (PVT) LTD. 7-B, KORANGI INDUSTRIAL AREA, KORANGI-KARACHI</div>			TITLE :							
			ELECTRICAL LOAD LIST (THORA DEEP-03 GGS)							
			DOCUMENT NO:							
PROJECT NUMBER 14-0258			0258 - ELA - 6512 - 1							
			PROJECT. CODE		DOC. TYPE		SEQ. NO.		REV.	
									SHEET 1 OF 2	

<div></div> <div>ENAR PETROTECH SERVICES (PVT) LTD.</div> <div>7-B, KORANGI INDUSTRIAL AREA, KORANGI-KARACHI</div>		ELECTRICAL LOAD LIST (THORA DEEP-03 GGS)												PROJECT NO. : 14-0258			<div></div> <div>OIL & GAS DEVELOPMENT COMPANY LIMITED</div>	
														REV. NO. : 1				
		DATE : 25-FEB-2022																
PROJECT : KPD-TAY COMPRESSION PROJECT																		
CLIENT : OIL & GAS DEVELOPMENT COMPANY LIMITED (OGDCL)																		
DOC. NO. : 0258-ELA-6512																		

S.NO.	LOAD DESCRIPTION	TAG NO.	LOAD TYPE	STARTING METHOD	PHASE SYSTEM	LOAD DUTY C/I/s	EQUIPMENT RATING			ABSORBED LOAD (B)	LOAD FACTOR (uF)	POWER FACTOR (P.f)	EFFICIENCY (%)η	MAIN BUS								
							VOLTAGE RATING (V)	RATED OUTPUT CAP (kW)	AMPACITY (A)					CONTINUOUS			INTERMITTENT			STANDBY		
														kW	kVA	kVAr	kW	kVA	kVAr	kW	kVA	kVAr
1	PROCESS DRAIN PIT PUMP MOTOR	PM-5801	Motor	DOL	3-Ø	I	400	7.5	12.03	5.48	0.73	0.9	0.914				6.00	6.67	2.91			
2	RAW WATER BORE PUMP MOTOR	PM-5802	Motor	DOL	3-Ø	C	400	4	6.42	2.92	0.73	0.9	0.914	3.20	3.56	1.55						
3	RAW WATER SUPPLY PUMP MOTOR	PM-5803	Motor	DOL	3-Ø	C	400	2.2	3.53	1.61	0.73	0.9	0.914	1.76	1.96	0.85						
4	INSTRUMENT AIR COMPRESSOR-A	K-5802A	Feeder	-	3-Ø	C	400	11	19.85	11.00	1.00	0.8	1.0	11.0	13.75	8.25						
5	INSTRUMENT AIR COMPRESSOR-B	K-5802A	Feeder	-	3-Ø	S	400	11	19.85	11.00	1.00	0.8	1.0							11.00	13.75	8.25
6	WELDING OUTLET (32 A, 3-Ø)	WO-01	Feeder	-	3-Ø	S	400	17.71	32.0	17.71	1.0	0.8	1.0							8.86	11.07	6.64
7	TRANSFORMER RECTIFIER (CP)	TR-01	Feeder	-	1-Ø	C	230	2.2	12.0	2.2	1.0	0.8	1.0	2.2	2.75	1.65						
8	UPS (10kVA)	UPS-01	Feeder	-	3-Ø	C	400	8.5	15.3	8.50	1.0	0.8	1.0	8.50	10.63	6.4						
9	BUILDING ELECTRIFICATION LOAD (Refer Note-5)	BLD-EL	Feeder	-	3-Ø	C	400	35.0	63.15	35.0	1.0	0.8	1.0	35.00	43.75	26.25						
10	LIGHTING LOAD	LTG-DB	Feeder	-	3-Ø	I	400	3.0	5.41	3.0	1.0	0.8	1.0				3.00	3.75	2.25			
TOTAL LOW VOLTAGE LOAD														61.66	76.39	44.93	9.00	10.42	5.16	19.86	24.82	14.89

<div>EXPLANATION OF CALCULATIONS</div> <div>Motor load is calculated as follows: Absorbed / Required Load (API Pumps) : Absorbed Load (B) for API Pump motors is calculated as: When CAP(kW) < 22 then (CAP(kW) / 1.25) * Efficiency, When 22 >= CAP(kW) <= 55 then B = (CAP(kW) / 1.15) * Efficiency, When CAP(kW) > 55, then B = (CAP(kW) / 1.10) * Efficiency. Absorbed Load (Non-API Pumps): Absorbed Load (B) for Non API Pump motors is calculated as: = CAP(kW) * Efficiency Load Factor : The Load Factor is calculated as: LF = B / CAP(kW) kW, kVAr & kVA: kW = (B)/(EF) kVAr = kW * tan kVA = $\sqrt{(kW^2 + kVAr^2)}$ Where: B = Absorbed/Required Power (kW), CAP = Rated Output (kW), uF = Load Factor, EF = Efficiency, PF = Power Factor ABBREVIATION: C - Continuous I - Intermittent S - Standby</div>	LOAD SUMMARY - LOW VOLTAGE												
								kW		kVA		kVAr	
	CONTINUOUS LOAD							61.66		76.39		44.93	
	MAXIIMUM DEMAND (100% of Continuous + 50% of Intermitant)							66.16		81.59		47.51	
	PEAK DEMAND (100% of Continuous + 50% of Intermitant + 50% Standby)							76.09		94.00		54.95	
	NOTES: 1. Developed electrical load list is based on FEED stage/preliminary; and no. of loads as marked may increase or decrease which will be further evaluated & updated by the CONTRACTOR after incorporating all details from package Vendors. 2. Typical values of efficiency and power factor have been used; actual values shall be incorporated after the availability of Vendor data. 3. 0.9 power factor (p.f) shall be considered by the Contractor for procurement of all Low Voltage Electrical motors. 4. IEC-IE3 efficeincy class shall be considered by the Contractor for procurement of all Low Voltage Electrical motors. 5. Building electrification load comprises the loads of Switchgear/MCC Room, CCR, Generator Shed, Security Guard Room, FC Living Compound, Pantry/Operator/employee room and Workshop. The CONTRACTOR shall be responsible to evaluate and update the referred loads individually to be finalized duringthe detailed engineering.												