






ISSUED FOR TENDER

0	07-JAN-2022	ISSUED FOR TENDER	JAB	ZHW	AIB	MPM	MAS		
A	29-OCT-2021	ISSUED FOR REVIEW	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 :						
			DATA SHEET FOR LV A.C INDUCTION MOTOR						
			DOCUMENT NO:						
			0258 - ELA - 6510 - 0						
PROJECT NUMBER 14-0258			PROJECT. CODE		DOC. TYPE		SEQ. NO.		REV.

 ENAR PETROTECH SERVICES (PVT.) LTD. Plot No. 7-B, Sector-7A Korangi Industrial Area Karachi-74900	GENERAL DATA SHEET FOR LV A.C INDUCTION MOTOR		PROJECT NO. : 14-0258
			REV. NO. : 0
	PROJECT NAME : KPD-TAY COMPRESSION PROJECT		DATE : 07-JAN-2022
	CLIENT : OIL & GAS DEVELOPMENT CO. LTD. (OGDCL)		SHEET : 2 of 3
DOCUMENT NO. : 0258-ELA-6510			
LV A.C INDUCTION MOTORS			
GENERAL NOTES			
1- Please refer to Specification for Motors 0258-ELA-6502 for detail specifications. 2- Vendor shall provide the Motor Data Sheet with Thermal Curve, Performance Curves of Torque & Speed X Current on 80% & 100% of rated voltage of the offered model. 3- Vendor shall provide a routine test certificate for each motor. 4- Equipment shall be designed as per area classification. 5- Vendor to advice enclosure material which is suitable for atmosphere that is made corrosive by traces of chemicals noramlly present in a Gas processing facility and in an environment having sulfurous and corrosive conditions; and that may include high humidity, storms, and possible effect of airborne particles etc. 6- Vendor to submit the coupling method details with drawings for COMPANY approval prior to manufacturing. 7- Vendor to ensure that voltage surges or rate of rise of Voltage surges shall not jeopardize the motor winding and its insulation life. 8- Power factor of all L.V Motors shall be in accordance with efficiency class of IE-3 at 100% & 75% load. 9- Rated out put values (kW) shall comply with the values listed in IEC Publication. 10- Cable Gland shall be nickel plated brass & suitable for area classification. 11- All the LV A.C induction motors with ratings above from 0.75 kW shall be supplied at 400 Volts, 3-Phase, 50Hz. Motors with ratings 0.75 kW and below shall be be single phase 230Volts 50Hz for industrial use; whereas 3-Phase motor will apply for hazardous area. 12- For the selection of motor starting method, refer Electrical Design Basis Doc. No. "0258-ELA-6500", and project single line diagrams. 13- Vendor/Manufacturer shall refer the "Hazardous Equipment Schedule" (to be developed by the CONTRACTOR during detail engineering) for the equipment selection w.r.t pertinent area classification. 14- Space heaters shall be provided for motors equal and larger than 22kW and above. Rated voltages for space heaters shall be 230 Volts single phase 50 Hz. 15- All LV A.C induction motors rated 185 kW and above shall include Resistance thermometer detector (RTD) embedded in the stator. 16- To be confirmed and marked by the CONTRACTOR during detail engineering.			

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DOCUMENT NO. : 0258-ELA-6510								
LV A.C INDUCTION MOTORS								
GENERAL SPECIFICATION / REQUIREMENTS AND CONDITIONS					MOTOR MANUFACTURER DATA			
1	Equipment Tag	As per Load List	Qty	VTA	34	Manufacturer	VTA	
2	Equipment Service	As per Electrical Load List			35	Frame Size	VTA	
3	Motor Type	Squirrel Cage Induction Motor			36	Frame Material	VTA	
4	Rated Output	VTA ^{*(9)}	kW		37	Full Load Current	VTA A	
5	Rated Voltage	400 ^{*(11)}	V		38	Locked Rotor Current	VTA A	
6	Allowable Volatage Variation	± 10%			39	Starting Current Ratio	VTA A	
7	Frequency (Hz)	50			40	Rated Torque	VTA Nm	
8	Allowable Frequency Variation	± 2%			41	Moment of Inertia	VTA kgm ²	
9	Phase	3 ^{*(11)}			42	Rated Power	VTA ^{*(9)}	
10	Speed	To suit application			43	Starting Power Factor	VTA	
11	No. of Poles	To suit application			44	Mounting	VTA	
12	Duty Type	Continuous			45	Coupling Method	<input type="checkbox"/> Direct <input type="checkbox"/> V-Belt <input type="checkbox"/> Gear Box	
13	Service Factor	VTA			46	Rotation (Facing Drive End)	<input type="checkbox"/> Clockwise <input type="checkbox"/> Anti-Clockwise	
14	Enclosure	TEFC			47	Noise Level	85 dBA at 1 m	
15	Ingress Protection	IP 55	Motor	IP 56	Terminal Box	48	Hazardous Area Certification	VTA ^{*(13)}
16	Insulation Class	F			49	Weight of Motor	VTA kg	
17	Temperature Rise	B			50	Vibration	IEC-60034 & applicable IEC standards	
18	Motor Starting Method ^{*(12)}	<input type="checkbox"/> DOL	<input type="checkbox"/> Y-D	<input type="checkbox"/> VFD	<input type="checkbox"/> SoftStart	51	Efficiency	IE3-Efficiency Class as per IEC-60034-30-1
19	Location	<input type="checkbox"/> Outdoor		<input type="checkbox"/> Indoor		52	100% Load	VTA %
20	Area Classification ^{*(13)}	<input type="checkbox"/> Hazardous		<input type="checkbox"/> Safe		53	75% Load	VTA %
21	Class				54	50% Load	VTA %	
22	Zone				55	No Load		
23	Group				56	Power Factor		
24	Temperature Class				57	100% Load	≥ 0.9	
25	Altitude	250 Ft Above Sea Level			58	75% Load	≥ 0.9	
26	Humidity	Maximum	77%	Minimum	22%	59	50% Load	VTA
27	Ambient Temperature	Maximum	118 °F	Minimum	36 °F	60	No Load	VTA
28	Space Heater ^{*(14)}	<input type="checkbox"/> Yes	<input type="checkbox"/> No	VTA	Watt	230	Volt	61
29	Winding RTD ^{*(15)}	<input type="checkbox"/> Yes	<input type="checkbox"/> No	2	Nos.	Per / ph		62
30	Power Cable Size	VTA ^{*(16)}			63	Drive End	VTA	
31	No. of Power Cable Runs	VTA ^{*(16)}			64	Non-Drive End	VTA	
32	Cable Type	0.6/1kV,CU/XLPE/PVC/SWA/PVC			65	Lubricant	VTA	
33	Cable Gland	VTA			66	Motor Specification	0258-ELA-6502	
<p>a) The CONTRACTOR shall develop detailed motor data sheet for each motor during detailed engineering based on detailed hazardous schedule (to be developed during the detail engineering) as projected in to electrical load list. Minimum details shall be provided as listed above.</p> <p>b) The CONTRACTOR/Manufacturer shall refer the general notes and shall complete the Motor Data Sheet.</p> <p>VTA - Vendor to Advise/Provide</p> <p>VTC - Vendor to confirm</p> <p>TECF - Totally Enclosed Fan Colled</p> <p>DOL - Direct - Online -Load</p> <p>Y-D - Star - Delta</p> <p>VFD - Variable Frequency Drive</p> <p>*(x) - Reference General Note No.</p>								