

Annexure-XI		MAHAGENCO.			
		BHUSAWAL 1X 660 MW – FGD SYSTEM DATA SHEET – A1 HT/LT MOTORS			SHEET 1 OF 6

Sl. No.	Description	Unit	Specification Requirement	Bidder Details
I	AC Motors			
1.0	Application		*	
2.0	Designation & Frame size		*	
3.0	Number of units		As required	
4.0	Manufacturer		*	
5.0	Type of motors		Squirrel cage Induction Motor	
6.0	Supply system fault level			
6.1	HT Motors	kA	44 RMS (112kA Peak)	
6.2	LT Motors	kA	50 RMS (100kA Peak)	
7.0	Rating			
7.1	Rated voltage	kV	3.3 KV for HT 0.415kV for LT	
7.2	Output	kW	*	
7.3	Load factor		*	
7.4	Number of phases and frequency			
7.4.1	HT		3-phase, 3-wire, 50Hz	
7.4.2	LT		3-phase, 3-wire, 50 Hz	
8.0	Speed	rpm	*	
9.0	Duty		Continues	
10.0	Type of duty		S1	
11.0	Reference ambient temperature	Deg. C	50	
12.0	Installation			

REV. NO.						CLIENT:
DATE						M/s MAHAGENCO
REV. BY						PROJECT: BHUSAWAL 1X 660 MW – FGD SYSTEM

Annexure-XI		MAHAGENCO.				
		BHUSAWAL 1X 660 MW – FGD SYSTEM DATA SHEET – A1 HT/LT MOTORS			SHEET 2 OF 6	

Sl. No.	Description	Unit	Specification Requirement	Bidder Details
12.1	Location		Indoor	
12.2	Atmosphere		Salty	
13	Allowable variations in supply Conditions			
13.1	Voltage	%	± 10	
13.2	Frequency	%	± 5	
13.3	Combined	%	10	
14.0	Efficiency	%	*	
15.0	Rated power factor		*	
16.0	Power factor during starting		*	
17.0	Current			
17.1	Full load	Amps	*	
17.2	Starting	% FL	*	
18.0	Method of starting		DOL	
19.0	Insulation			
19.1	Class of insulation		Class F	
19.2	Temperature rise by Resistance method	Deg. C	As per technical spec	
20.0	Type of cooling		As per IS6362	
20.1	HT Motors		CACA/TETV/TEFC	
20.2	LT Motors		TEFC	
21.0	Hazardous area division		As per specification	
22.0	Earthing conductors			
22.1	Material		GS	
22.2	Size	mm	*	
23.0	Miscellaneous			

REV. NO.						CLIENT:
DATE						M/s MAHAGENCO
REV. BY						PROJECT: BHUSAWAL 1X 660 MW – FGD SYSTEM

Annexure-XI		MAHAGENCO.				
		BHUSAWAL 1X 660 MW – FGD SYSTEM DATA SHEET – A1 HT/LT MOTORS			SHEET 3 OF 6	

Sl. No.	Description	Unit	Specification Requirement	Bidder Details
23.1	Shaft orientation & Mounting symbol		*	
24.0	Bearings			
24.1	Make		*	
24.2	Type of Bearing			
24.2.1	Drive end		*	
24.2.2	Non drive end		*	
24.3	Permissible temperature rise for bearings	Dec C	*	
25.0	Permissible vibration limits	Mm/sec	As per IS 325	
26.0	Whether CTs required for differential protection		*	
27.0	CT particulars			
27.1	CT ratio			
27.2	Class		PS/X	
27.3	Knee point voltage (K.P.V)		*	
27.4	Max. Rct, secondary winding resistance	ohm	*	
27.5	Maximum exciting current at ½ (K.P.V)	A	*	
27.6	Class of Insulation		Class B or Better	
28.0	Degree of protection			
28.1	Indoor		IP-54	
28.2	Outdoor		IP-55	
29.0	Terminal Box			
29.1	Degree of protection		IP-55	
29.2	Short time			
	a) Current	kA (RMS)	50/44	

REV. NO.						CLIENT:
DATE						M/s MAHAGENCO
REV. BY						PROJECT: BHUSAWAL 1X 660 MW – FGD SYSTEM

Annexure-XI		MAHAGENCO.				
		BHUSAWAL 1X 660 MW – FGD SYSTEM DATA SHEET – A1 HT/LT MOTORS			SHEET 4 OF 6	

Sl. No.	Description	Unit	Specification Requirement	Bidder Details
	b) Time	secs	0.25	
29.4	Dynamic	kA (peak)	105/112	
30.0	External cable details			
30.1	Type		Al. conductor, XLPE insulated	
30.2	Size		*	
30.3	Number of Cores		3 Cores	
31.0	Normal winding connection	Star / Delta	*	
32.0	Permissible no. of starts		As per spec.	
33.0	Hot thermal withstand time at 110% of the rated voltage.	Sec	As per spec.	
34.0	Starting time at 80% of the rated voltage.	Sec	As per spec.	
35.0	Thermal characteristics, starting characteristics and negative sequence characteristics to be furnished		*	
36.0	Motor reactance		*	
36.1	Sub-transient reactance	PU	*	
36.2	Transient reactance	PU	*	
36.3	Steady state reactance	PU	*	
37.0	Guaranteed losses		*	
37.1	Iron loss	kW	*	
37.2	Copper loss	kW	*	
37.3	Friction, Windage & Stray losses.	kW	*	
38.0	Weights and Dimensions		*	

REV. NO.						CLIENT:
DATE						M/s MAHAGENCO
REV. BY						PROJECT: BHUSAWAL 1X 660 MW – FGD SYSTEM

Annexure-XI		MAHAGENCO.				
		BHUSAWAL 1X 660 MW – FGD SYSTEM DATA SHEET – A1 HT/LT MOTORS			SHEET 5 OF 6	

Sl. No.	Description	Unit	Specification Requirement	Bidder Details
39.0	Paint Shade		RAL 7032 EPOXY BASED	
40.0	Dimensioned drawing enclosed		*	
41.0	Max. value of induced shaft voltage	mV	*	
II	Motors for Hazardous Area Application			
42.0	Type of construction		Flame proof type	
43.0	Degree of protection		IP - 55	
	Note: All items indicated above under AC motors are applicable here also.			
III	Valve Actuator & its Motor			
44	Application		Valves as per requirement	
45	Degree of protection		IP 68	
46	Indoor / Outdoor / Explosion proof		As per requirement at the location where it is installed	
47	Power supply		*	
48	Actuator type		Integral type	
49	Type of duty & duty designation for motor		Intermittent duty & S2	
50	Class of insulation for motor		Class F but Temperature rise limited to class B	
51	Interposing relays for receiving remote command signal		Required	

REV. NO.						CLIENT:
DATE						M/s MAHAGENCO
REV. BY						PROJECT: BHUSAWAL 1X 660 MW – FGD SYSTEM

Annexure-XI		MAHAGENCO.				
		BHUSAWAL 1X 660 MW – FGD SYSTEM DATA SHEET – A1 HT/LT MOTORS			SHEET 6 OF 6	

Sl. No.	Description	Unit	Specification Requirement	Bidder Details
52	Terminal box		Separate terminal box shall be provided for power and control wiring.	
52.1	Gaskets		Neoprene	
52.2	Terminals for motors		Stud type with plain washers, spring washers and check nuts	

‘*’ Indicated above shall be filled by the Bidder and submitted along with the Bid.

REV. NO.						CLIENT:
DATE						M/s MAHAGENCO
REV. BY						PROJECT: BHUSAWAL 1X 660 MW – FGD SYSTEM

