	PRICE FORMAT For **Programmable Logic Controller and AC Drive System**	**FOR SPECIFICATION NO.** **IS.BG4.08/01 &** **IS.BG4.08/02**
ISG - BANGALORE		

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SECTION-A

AUTOMATION SYSTEM

Note :Unit price will be used for addition/deletion purposes during detailed engineering.
Indicate Type no: & quantity of Communication interface card ,Power supply card,chassis or any other card as required to meet the complete specification & configuration.
All items quoted shall completely meet the technical specifications in the enquiry

Supplier :

Address:

Sl no	Item Description	TYPE NO	Total Qty	Unit Price (Rs)	Total Price (Rs)	Remarks
1	PLC with redundant CPU and redundant power supply, one power supply for interrogation, communication cards and all necessary cards/connectors to meet the system configuration & specification					
2	PLC with one CPU and one power supply, one power supply for interrogation, communication cards					

Sl no	Item Description	TYPE NO	Total Qty	Unit Price (Rs)	Total Price (Rs)	Remarks
	and all necessary cards/connectors to meet the system configuration & specification					
3	Remote I/O rack with one power supply, communication cards and all necessary cards/connectors to meet the system configuration & specification					
4	PLC programming software with license , CD etc .This shall include all software required to interface with HMI stations , Input/Outputs ,drives, third party devices. It shall comply with IEC 1131-3					
5	HMI development with runtime software with 10,000 tags					
6	HMI runtime software with 10,000 tags					
7	CPU (Redundancy)					
8	CPU					
9	CPU (Safety PLC)					
10	Central Rack for CPU					
11	PS for CPU					
12	Battery					
13	Memory card 2MB					
14	Ethernet Module					
15	Comm. Port connector					

Sl no	Item Description	TYPE NO	Total Qty	Unit Price (Rs)	Total Price (Rs)	Remarks
	without PG Port					
16	Comm. Port connector with PG Port					
17	Sync Module					
18	Sync FO Cable					
19	Comm Cable per Meter					
20	Repeater					
21	Interface module with redundancy					
22	Interface module without redundancy					
23	Power supply for Interface Module					
24	Mounting Rail					
25	DI cards with Accessories					
26	DO cards with Accessories					
27	Analog Input card with Accessories					
28	Analog Output card with Accessories					
29	DI cards (Fail Safe)					
30	DO Cards (Fail Safe)					
31	Analog Input card (Fail Safe)					
32	Safety Barriers					
33	Interposing Relays					
34	Pulse counter card					
35	8 channel RTD card					
36	8 Channel T/C card					
37	Card for serial communication					
38	Active bus modules for I/Os					

Sl no	Item Description	TYPE NO	Total Qty	Unit Price (Rs)	Total Price (Rs)	Remarks
39	Front connectors 40 Pin					
40	Front connectors 20 Pin					
41	Any other module,extention cable etc as required to meet specification (to be listed by supplier)					
42	Panels, Switch gears, wiring of panels shall be quoted as optional items for Sl. No. 1					
43	Panels, Switch gears, wiring of panels shall be quoted as optional items for Sl. No. 2					
44	Panels, Switch gears, wiring of panels shall be quoted as optional items for Sl. No. 3					

SECTION-B

AC DRIVE SYSTEM

(A) The prices shall be submitted in the following format for the typical steel plant application

S No	Description	Motor Type	Motor KW	RPM	Motor Voltage	Motor Qty	VVVF Qty.	Unit Price		Total Price
								Module Price	Panels, Switch gears, wiring of panels	
1.								Module Price	Panels, Switch gears, wiring of panels	
2.	Converter Tilt Drive	SCIM/T	315	750	415V	4	4			
3.	Lance Hoist	SCIM/T	75	1500	415V	2	2			
4.	Transfer Car	SCIM/T	45	1500	415V	2	2			
5.	Scrap box Transfer Car	SCIM/T	75	1500	415V	2	2			
6.	ID Fan	SCIM/T	2700	1500	3300V	2	2			

Panels, Switch gears, wiring of panels shall be quoted as optional items

(B) The prices shall be submitted for the following list of AC Drives of a Steel Plant Rolling Mill application:

AREA-B:
This indicates the scope of future requirement of AC Motor drives in various steel plant projects of BHEL.

Sl. No.	Equipment	Motor Type	Motor KW	Motor RPM	Motor Voltage	Motor Quantity	VVVF Quantity	Unit Price		Total Price
								Module Price	Panels, Switch gears, wiring of panels	
1	Roller table	SCIM/G	4	0-1500	415	72	4			
2	Roller table	SCIM/G	4	0-1500	415	13	1			
3	Roller table	SCIM/G	4	0-1800	415	9	1			
4	Pinch roll	SCIM	17	0-1800	415	1	1			
5	Shear	SCIM	400	0-1132	690	1	1			

Sl. No.	Equipment	Motor Type	Motor KW	Motor RPM	Motor Voltage	Motor Quantity	VVVF Quantity	Unit Price		Total Price
6	Stand No. 1	SCIM	480	0-1000/2000	690	1	1			
7	Stand No. 2	SCIM	480	0-1000/2000	690	1	1			
8	Stand No. 3	SCIM	750	0-1000/2000	690	1	1			
9	Stand No. 4	SCIM	750	0-1000/2000	690	1	1			
10	Stand No. 5	SCIM	900	0-1000/2000	690	1	1			
11	Stand No. 6	SCIM	900	0-1000/2000	690	1	1			
12	Stand No. 7	SCIM	900	0-1000/2000	690	1	1			
13	Stand No. 8	SCIM	900	0-1000/2000	690	1	1			
14	Stand No. 9	SCIM	900	0-1000/2000	690	1	1			
15	Stand No. 10	SCIM	900	0-1000/2000	690	1	1			
16	Stand No. 11	SCIM	900	0-1000/2000	690	1	1			
17	Stand No. 12	SCIM	900	0-1000/2000	690	1	1			
18	Stand No. 13	SCIM	900	0-1000/2000	690	1	1			
19	Stand No. 14	SCIM	900	0-1000/2000	690	1	1			
20	shear #1	SCIM	400	0-1132	690	2	2			
21	shear #2	SCIM	315	0-1000	690	2	2			
22	Coil transfer	SCIM/G	3	0-1500	415	1	1			
23	Lubrication unit	SCIM	55	1800	415	1	1			
24	Lubrication unit	SCIM	55	1800	415	1	1			
25	Lubrication unit	SCIM	55	1800	415	1	1			
26	Stand No. 15H	SCIM	380	0-1000/2000	690	2	2			
27	Stand No. 16V	SCIM	380	0-1000/2000	690	2	2			
28	Stand No. 17H	SCIM	380	0-1000/2000	690	2	2			
29	Stand No. 18V	SCIM	380	0-1000/2000	690	2	2			
30	Mill # 1	SCIM	4800	0-900/1500	3300	2	2			
31	Mill # 2	SCIM	3600	0-900/1500	3300	2	2			
32	Rotary shear	SCIM	160	0-790	415	2	2			
33	Pinch roll unit	SCIM	30	0-900/1200	415	4	4			
34	Rotary shear	SCIM	160	0-790	415	2	2			
35	Chopping shear	SCIM	86	0 -940	415	2	2			
36	Pinch roll unit	SCIM	200	0-1500/2700	690	2	2			
37	Horizontal Loop Layer	SCIM	250	0-1500/2600	690	2	2			
38	First roller table	SCIM	10	65-800/2000	415	2	2			
39	Cooling conveyor	SCIM	10	65-800/2000	415	20	20			
40	Feeding roller table	SCIM	10	65-800/2000	415	2	2			
41	Entry rollers	SCIM/G	1,1	n2=8-158/239	415	4	2			

Note: SCIM - AC Squirrel cage Motor   **SCIM/G -** AC Squirrel cage Gear Motor

Panels, Switch gears, wiring of panels shall be quoted as optional items

4. AREA-C: 6Hi Cold Rolling Mill

Sl. No.	Equipment	Motor Type	Motor KW	Motor RPM	Motor Voltage	Motor Quantity	VVVF Quantity	Unit Price		Total Price
								Module Price	Panels, Switch gears, wiring of panels	
1	PAY-OFF REEL	SCIM	1 x 0 - 760-760 / 760	0 - 439- 443 / (1500)	690	1	1			
2	REVERSING REEL 1	SCIM	1 x 0 - 2180 - 2180 / 2180	0 - 292- 438 / (1500)	3300	1	1			
3	MILL STAND	SCIM	1 x 0 - 5000 / 5000	0 - 354 / 955	3300	1	1			
4	REVERSING REEL 2	SCIM	1 x 0 - 2180 - 2180 / 2180	0 - 292- 438 / (1500)	3300	1	1			

SCIM - AC Squirrel cage Motor
Panels, Switch gears, wiring of panels shall be quoted as optional items

4. AREA-D:

Sl. No.	Equipment	Motor Type	Motor KW	DRIVE CONFIG	Unit Price		Total Price
					Module Price	Panels, Switch gears, wiring of panels	
1	DRIVE BOARD – **SB2**	SCIM	AS PER SLD	AS PER SLD			
2	DRIVE BOARD – **SB3**	SCIM	AS PER SLD	AS PER SLD			
3	DRIVE BOARD – **SB4**	SCIM	AS PER SLD	AS PER SLD			
4	DRIVE BOARD – **SB5**	SCIM	AS PER SLD	AS PER SLD			
5	DRIVE BOARD – **SB6**	SCIM	AS PER SLD	AS PER SLD			
6	DRIVE BOARD – **SB7**	SCIM	AS PER SLD	AS PER SLD			
7	DRIVE BOARD – **SB8**	SYNCHONOUS MOTOR	AS PER SLD	AS PER SLD			
8	DRIVE BOARD – **SB9**	SCIM	AS PER SLD	AS PER SLD			
1	DRIVE BOARD – **SB10**	SCIM	AS PER SLD	AS PER SLD			

SCIM - AC Squirrel cage Motor
Panels, Switch gears, wiring of panels shall be quoted as optional items

AREA –E:

Sl. No.	Equipment	Motor Type	Motor KW	Motor RPM	Motor Voltage	Motor Quantity	VVVF Quantity	Unit Price		Total Price
								Module Price	Panels, Switch gears, wiring of panels	
1	Mine Winder	SCIM	450	0-1000	415	1	1			
2	Mine Winder	SCIM	1100	0-1000	690	1	1			

Panels, Switch gears, wiring of panels shall be quoted as optional items