

Tech. Cell



**BHARAT COKING COAL LIMITED**  
(A Subsidiary of Coal India Limited)  
Office of the General Manager(MM)  
Koyla Bhawan : Koyla Nagar  
Dhanbad : 826 005

**GRAM ; KOKINGKOL**  
(Phone No. 0326 - 2230181)  
(Fax No. 0326 -2230183)

Ref. No. BCCL/Pur/615122/Elec Spares/EKG/15-16/239

dt 14.03.16

To,

**PURCHASE ORDER**  
By Speed post

M/s. Heavy Engineering Corporation Limited, Marketing Deptt, HMBP Ranchi-834004 FAX: 0651-2408166/2408571	Vender Code: 1/13/M/P/005
	Vendor Type: OEM

**Sub: Supply of Electrical Spares for EKG 4.6/5 Shovel**

Ref: i) Our Tender No. BCCL/Pur/615122/Elec Spares/EKG/15-16/76 dt 11.09.15 opened on 21.09.2015

Dear Sirs,

With reference to above we, for and on behalf of BCCL, hereby place order for supply of Electrical Spares for EKG 4.6/5 Shovel in three phases at the following price, terms & conditions and the technical specification as under:

**1st Phase**

Sl. No.	DESCRIPTION	PART NUMBER	QTY in no. (1st Phase)	Unit rate Rs	Value in Rs.
1.	CROWD MOTOR COOLING ASSY, 1.1KW MC: 15506990371/15501975756	1080.05.800.1CB	2	49750.00	99500.00
2.	SWING MOTOR COOLING ASSY, 1.1KW MC: 15501993224	1080.18.40.2	0	49750.00	0.00
3.	HOIST MOTOR COOLING ASSY, 3.0KW MC: 15501994477	1080.20.00.CE	0	67250.00	0.00
4.	BODY COOLING FAN	1080.25.009.2	0	30000.00	0.00

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5.	CURRENT LIMIT UNIT OF SWING / PROPEL CIRCUIT MC: 15504990754/ 15501988921	6PE.369.715/ bTOB	12	5625.00	67500.00
6.	CURRENT LIMIT UNIT FOR CROWD CIRCUIT MC: 15501988920/ 15501978206	6PE.369.715/ bTO II	15	5625.00	84375.00
7.	CURRENT LIMIT UNIT FOR HOIST CIRCUIT MC: 15501978221/ 15504993962	6PE.369.715/ bTOH	15	5625.00	84375.00
8.	DIODE, 16AMPS, PIV - 1200V MC: 94998180013	D816T	20	788.00	15760.00
9.	MEASURING SHUNT, 1500AMPS, 75Mv MC: 15501993517		10	8250.00	82500.00
10.	MEASURING SHUNT, 500AMPS, 75Mv MC: 15501999143		16	3750.00	60000.00
11.	SWING / PROPEL MASTER CONTROLLER, Four position Six Circuit paddle operated controller. MC: 15561990502	BK 8252	3	40000.00	120000.00
12.	CROWD MASTER CONTROLLER, Four position Six circuit controller. MC: 15506991632	BK8203	2	35149.00	70298.00

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13.	HOIST MASTER CONTROLLER, Four position Six circuit controller.  MC: 15506992304	BK8209	2	35149.00	70298.00
14.	DC CONTACTOR, 250AMPS / 300AMPS , Holding Coil - 110 V DC  MC: 15501973673	KIIB - 604	3	178750.00	536250.00
15.	COIL FOR 250/300AMPS DC CONTACTOR, 110V DC  MC: 94096071614	5BK.522.284	3	8750.00	26250.00
16.	DC CONTACTOR, 63 / 25AMPS , Holding Coil - 110 V DC  MC: 15501962412	KIID-12IT	4	7000.00	28000.00
17.	COIL FOR 63 / 25AMPS CONTACTOR, 110V DC  MC: 15501991932	5TD.520.058.1	1	5250.00	5250.00
18.	DC AMMETER, Range: 1500-0-1500 AMPS for Hoist motor current, moving coil type having 240 degree deflection, suitable for 75mv shunt, Size - 72X 72 sq. mm.  MC: 15501983674	M42100T/4200	10	2475.00	24750.00
19.	DC AMMETER, Range: 500-0-500AMPS, for crowd / swing motor current, moving coil type having 240 degree deflection, suitable for 75mv shunt, Size - 72X 72 sq. mm.  MC: 15501982931	M42100/4200	10	2475.00	24750.00

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		M42100/4200	10	2475.00	24750.00
	measuring exciter voltage, moving coil type having 240 degree deflection, suitable for 75mv shunt, Size - 72X 72 sq. mm. MC: 15501980023				
21.	Over load Relay for hoist with coil voltage 48V DC, 2NO + 2NC contacts, Pickup voltage 30V + 1VDC MC: 15501992766	VR - 821	0	22250.00	0.00
22.	D.C. RELAY MC: 15501992766	P-B-821	2	7600.00	15200.00
23.	COIL, 110 Volts MC: 15501998392	5.BK.522.299.4	2	8750.00	17500.00
24.	UNIVERSAL SWITCH, CROWD MC: 15501991727	Y1153312 - C128-T	10	5250.00	52500.00
25.	UNIVERSAL SWITCH, HOIST & SWING / PROPEL MC: 15501991683	Y115311-113-T	12	6750.00	81000.00
26.	UNIVERSAL SWITCH, STEERING CLUTCH MC: 15501962729	Y11532-343-T	10	6750.00	67500.00
27.	RESISTOR WIRE WOUND, 1.8 OHMS, 400W MC: 15506995741	CP - 300.1.8	0	2500.00	0.00
28.	RESISTOR WIRE WOUND, 4.8 OHMS, 400W	CP - 300.4	0	2500.00	0.00

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	MC: 15501994556				
29.	300 OHM, 50W, CIRCULAR VARIABLE RESISTOR  MC: 15501981086	BP-50.300	8	1100.00	8800.00
30.	82 OHM, 50W, CIRCULAR VARIABLE RESISTOR	BP-50.82	6	1100.00	6600.00
31.	200 OHM, 50W, CIRCULAR VARIABLE RESISTOR  MC: 15501980833	BP-50.200	8	1100.00	8800.00
32.	1100 OHM, 50W, CIRCULAR VARIABLE RESISTOR  MC: 15501981441	BP501100	16	1500.00	24000.00
33.	1500 OHM, 50W, CIRCULAR VARIABLE RESISTOR  MC: 15501993872	BP501500	10	1500.00	15000.00
34.	SOLENOID FOR AIR VALVE 110V DC  MC: 15506991439	BB - 32 - III	8	7375.00	59000.00
35.	MCCB, 415V, 3 PHASE, 200AMPS  MC: 94099990091		8	27500.00	220000.00
36.	MCCB, 415V, 3 PHASE, 50AMPS  MC: 94096990106		10	24875.00	248750.00
37.	MCCB, 415V, 3 PHASE, 20AMPS  MC: 94096992613		10	24875.00	248750.00

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38.	HV CURRENT COLLECTOR SIDE ASSY (BHEL TYPE) MC: 15501982007	44.6701	12	12000.00	144000.00
39.	SUPPORT INSULATOR (HV CURRENT COLLECTOR) MC: 15506991142	8ND.720.005	30	3200.00	96000.00
40.	LOW VOLTAGE RING TYPE CURRENT COLLECTOR ASSY (BHEL TYPE) MC: 94096991684	K - 5AT	2	60000.00	120000.00
41.	LV CARBON BRUSH MC: 15501955592	5TD554002	100	913.00	91300.00
42.	CONTACTOR ASSY, 3 POLE, 63 / 70AMPS, 400/440V, AC 50Hz, auxiliary contact - 2NO + 2NC, Holding coil voltage - 400/220V, AC 50Hz MC: 94096071634		8	26250.00	210000.00
43.	CONTACTOR ASSY, 3 POLE, 32AMPS, 400/440V, AC 50Hz, auxiliary contact - 2NO + 2NC, Holding coil voltage - 400/220V, AC 50Hz MC: 94096999381		10	14950.00	149500.00
				Subtotal	33,08,806.00
				ED@12.50%	4,13,600.75
					37,22,406.75
				VAT @14%	5,21,136.95
				Total landed cost	42,43,543.70

Rounded off to Rs 42,43,543.00

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Second Phase (2 nd Phase)

SL. NO	DESCRIPTION	PART NUMBER	QTY in no. (2 nd Phase)	Unit rate Rs	Value in Rs.
1)	CROWD MOTOR COOLING ASSY, 1.1KW  MC: 15506990371/1550197575 6	1080.05.800.1CB	2	49750.00	99500.00
2)	SWING MOTOR COOLING ASSY, 1.1KW  MC: 15501993224	1080.18.40.2	3	49750.00	149250.00
3)	HOIST MOTOR COOLING ASSY, 3.0KW  MC: 15501994477	1080.20.00.CE	1	67250.00	67250.00
4)	BODY COOLING FAN UNIT, 1.1KW  MC: 15501978332	1080.26.009.2	4	30000.00	120000.00
5)	CURRENT LIMIT UNIT OF SWING / PROPEL CIRCUIT  MC: 15504990754/ 15501988921	6PE.369.715/ BTOB	8	5625.00	45000.00
6)	CURRENT LIMIT UNIT FOR CROWD CIRCUIT  MC: 15501988920/ 15501978206	6PE.369.715/ BTO H	4	5625.00	22500.00
7)	CURRENT LIMIT UNIT FOR HOIST CIRCUIT  MC: 15501978221/	6PE.369.715/ BTOH	5	5625.00	28125.00

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	DC CONTACTOR, 250 AMPS, 110V 1200V MC: 94098180013	D816T	20	788.00	15760.00
9)	MEASURING SHUNT, 1500AMPS, 75Mv MC: 15501993517		5	8250.00	41250.00
10)	MEASURING SHUNT, 500AMPS, 75Mv MC: 15501999143		8	3750.00	30000.00
11)	SWING / PROPEL MASTER CONTROLLER, Four position Six Circuit paddle operated controller. MC: 15561990502	BK 8252	2	40000.00	80000.00
12)	CROWD MASTER CONTROLLER, Four position Six circuit controller. MC: 15506991632	BK8203	1	35149.00	35149.00
13)	HOIST MASTER CONTROLLER, Four position Six circuit controller. MC: 15506992304	BK8209	1	35149.00	35149.00
14)	DC CONTACTOR, 250AMPS / 300AMPS , Holding Coil - 110 V DC MC: 15501973673	K11B - 604	2	178750.00	357500.00
15)	COIL FOR 250/300AMPS DC CONTACTOR, 110V DC	5BK.522.284	1	8750.00	8750.00

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	MC: 94096071614				
16)	DC CONTACTOR, 63 / 25AMPS , Holding Coil - 110 V DC  MC: 15501962412	KHID-12IT	1	7000.00	7000.00
17)	COIL FOR 63 / 25AMPS CONTACTOR, 110V DC  MC: 15501991932	5TD.520.058.1	1	5250.00	5250.00
18)	DC AMMETER, Range: 1500-0-1500 AMPS for Hoist motor current, moving coil type having 240 degree deflection, suitable for 75mv shunt, Size - 72X 72 sq. mm.  MC: 15501983674	M42100T/4200	4	2475.00	9900.00
19)	DC AMMETER, Range: 500-0-500AMPS, for crowd / swing motor current, moving coil type having 240 degree deflection, suitable for 75mv shunt, Size - 72X 72 sq. mm.  MC: 15501982931	M42100/4200	8	2475.00	19800.00
20)	DC VOLT METER, Range: 0 - 150V DC for measuring exciter voltage, moving coil type having 240 degree deflection, suitable for 75mv shunt, Size - 72X 72 sq. mm.  MC: 15501980023	M42100/4200	3	2475.00	7425.00
21)	Over load Relay for hoist with coil voltage 48V DC, 2NO + 2NC contacts, Pickup voltage	VR - 821	2	22250.00	44500.00

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22)	D.C. RELAY MC: 15501992766	P-B-821	0	7600.00	0.00
23)	COIL, 110 Volts MC: 15501998392	5.BK.522.299.4	2	8750.00	17500.00
24)	UNIVERSAL SWITCH, CROWD MC: 15501991727	Y1153312 - C128-T	5	5250.00	26250.00
25)	UNIVERSAL SWITCH, HOIST & SWING / PROPEL MC: 15501991683	Y115311-113-T	8	6750.00	54000.00
26)	UNIVERSAL SWITCH, STEERING CLUTCH MC: 15501962729	Y11532-343-T	0	6750.00	0.00
27)	RESISTOR WIRE WOUND, 1.8 OHMS, 400W MC: 15506995741	CP - 300.1.8	0	2500.00	0.00
28)	RESISTOR WIRE WOUND, 4.8 OHMS, 400W MC: 15501994556	CP - 300.4	12	2500.00	30000.00
29)	300 OHM, 50W, CIRCULAR VARIABLE RESISTOR MC: 15501981086	BP-50.300	0	1100.00	0.00
30)	82 OHM, 50W, CIRCULAR VARIABLE RESISTOR	BP-50.82	9	1100.00	9900.00
31)	200 OHM, 50W,	BP-50.200	6	1100.00	6600.00

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	CIRCULAR VARIABLE RESISTOR  MC: 15501980833				
32)	1100 OHM, 50W, CIRCULAR VARIABLE RESISTOR  MC: 15501981441	BP501100	10	1500.00	15000.00
33)	1500 OHM, 50W, CIRCULAR VARIABLE RESISTOR  MC: 15501993872	BP501500	10	1500.00	15000.00
34)	SOLENOID FOR AIR VALVE 110V DC  MC: 15506991439	BB - 32 - III	0	7375.00	0.00
35)	MCCB, 415V, 3 PHASE, 200AMPS  MC: 94099990091		7	27500.00	192500.00
36)	MCCB, 415V, 3 PHASE, 50AMPS  MC: 94096990106		0	24875.00	0.00
37)	MCCB, 415V, 3 PHASE, 20AMPS  MC: 94096992613		7	24875.00	174125.00
38)	HV CURRENT COLLECTOR SHOE ASSY (BHEL TYPE)  MC: 15501982007	44.6701	0	12000.00	0.00
39)	SUPPORT INSULATOR (HV CURRENT COLLECTOR)  MC: 15506991142	8ND.720.005	0	3200.00	0.00

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		K - 5AT	3	60000.00	180000.00
	COLLECTOR ASSY (BHEL TYPE) MC: 94096991684				
41)	LV CARBON BRUSH MC: 15501955592	5TD554002	60	913.00	54780.00
42)	CONTACTOR ASSY, 3 POLE, 63 / 70AMPS, 400/440V, AC 50Hz, auxiliary contact - 2NO + 2NC, Holding coil voltage - 400/220V, AC 50Hz MC: 94096071634		5	26250.00	131250.00
43)	CONTACTOR ASSY, 3 POLE, 32AMPS, 400/440V, AC 50Hz, auxiliary contact - 2NO + 2NC, Holding coil voltage - 400/220V, AC 50Hz MC: 94096999381		4	14950.00	59800.00
				Subtotal	21,95,763.00
				ED@12.50%	2,74,470.38
					24,70,233.38
				VAT @14%	3,45,832.67
				Total landed cost	28,16,066.05

Rounded off to Rs 28,16,066.00

Third Phase (3 rd Phase)

SL. NO	DESCRIPTION	PART NUMBER	QTY in no. (3 rd Phase)	Unit rate Rs	Value in Rs.
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1.	CROWD MOTOR COOLING ASSY, 1.1KW  MC: 15506990371/15501975756	1080.05.800.1C B	0	49750.00	0.00
2.	SWING MOTOR COOLING ASSY, 1.1KW  MC: 15501993224	1080.18.40.2	2	49750.00	99500.00
3.	HOIST MOTOR COOLING ASSY, 3.0KW  MC: 15501994477	1080.20.00.CE	2	67250.00	134500.00
4.	BODY COOLING FAN UNIT, 1.1KW  MC: 15501978332	1080.26.009.2	2	30000.00	60000.00
5.	CURRENT LIMIT UNIT OF SWING / PROPEL CIRCUIT  MC: 15504990754/ 15501988921	6PE.369.715/ bTOB	6	5625.00	33750.00
6.	CURRENT LIMIT UNIT FOR CROWD CIRCUIT  MC: 15501988920/ 15501978206	6PE.369.715/ bTO H	8	5625.00	45000.00
7.	CURRENT LIMIT UNIT FOR HOIST CIRCUIT  MC: 15501978221/ 15504993962	6PE.369.715/ bTOH	5	5625.00	28125.00
8.	DIODE, 16AMPS, PIV - 1200V  MC: 94098180013	D816T	20	788.00	15760.00
9.	MEASURING SHUNT, 1500AMPS, 75Mv  MC: 15501993517		5	8250.00	41250.00
10.	MEASURING SHUNT, 500AMPS, 75Mv		6	3750.00	22500.00

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	MASTER CONTROLLER, Four position Six Circuit paddle operated controller. MC: 15561990502	BK 8252	0	40000.00	0.00
12.	CROWD MASTER CONTROLLER, Four position Six circuit controller. MC: 15506991632	BK8203	1	35149.00	35149.00
13.	HOIST MASTER CONTROLLER, Four position Six circuit controller. MC: 15506992304	BK8209	1	35149.00	35149.00
14.	DC CONTACTOR, 250AMPS / 300AMPS, Holding Coil - 110 V DC MC: 15501973673	KIIB - 604	2	178750.00	357500.00
15.	COIL FOR 250/300AMPS DC CONTACTOR, 110V DC MC: 94096071614	5BK.522.284	1	8750.00	8750.00
16.	DC CONTACTOR, 63 / 25AMPS, Holding Coil - 110 V DC MC: 15501962412	KIID-12IT	2	7000.00	14000.00
17.	COIL FOR 63 / 25AMPS CONTACTOR, 110V DC MC: 15501991932	5TD.520.058.1	1	5250.00	5250.00
18.	DC AMMETER, Range: 1500-0-1500 AMPS for Hoist motor current, moving coil type having 240 degree deflection,	M42100T/4200	0	2475.00	0.00

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	suitable for 75mv shunt, Size - 72X 72 sq. mm.  MC: 15501983674				
19.	DC AMMETER, Range: 500-0-500AMPS, for crowd / swing motor current, moving coil type having 240 degree deflection, suitable for 75mv shunt, Size - 72X 72 sq. mm.  MC: 15501982931	M42100/4200	0	2475.00	0.00
20.	DC VOLT METER, Range: 0 - 150V DC for measuring exciter voltage, moving coil type having 240 degree deflection, suitable for 75mv shunt, Size - 72X 72 sq. mm.  MC: 15501980023	M42100/4200	0	2475.00	0.00
21.	Over load Relay for hoist with coil voltage 48V DC. 2NO + 2NC contacts, Pickup voltage 30V + 1VDC  MC: 15501992766	VR - 821	0	22250.00	0.00
22.	D.C. RELAY  MC: 15501992766	P-B-821	2	7600.00	15200.00
23.	COIL, 110 Volts  MC: 15501998392	5.BK.522.299.4	0	8750.00	0.00
24.	UNIVERSAL SWITCH, CROWD  MC: 15501991727	Y1153312 - C128-T	0	5250.00	0.00
25.	UNIVERSAL SWITCH, HOIST & SWING / PROPEL	Y115311-113-T	6	6750.00	40500.00

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	STEERING CLUTCH MC: 15501962729	Y11532-343-T	5	6750.00	33750.00
27.	RESISTOR WIRE WOUND, 1.8 OHMS, 400W MC: 15506995741	CP - 300.1.8	20	2500.00	50000.00
28.	RESISTOR WIRE WOUND, 4.8 OHMS, 400W MC: 15501994556	CP - 300.4	0	2500.00	0.00
29.	300 OHM, 50W, CIRCULAR VARIABLE RESISTOR MC: 15501981086	BP-50.300	6	1100.00	6600.00
30.	82 OHM, 50W, CIRCULAR VARIABLE RESISTOR	BP-50.82	0	1100.00	0.00
31.	200 OHM, 50W, CIRCULAR VARIABLE RESISTOR MC: 15501980833	BP-50.200	0	1100.00	0.00
32.	1100 OHM, 50W, CIRCULAR VARIABLE RESISTOR MC: 15501981441	BP501100	10	1500.00	15000.00
33.	1500 OHM, 50W, CIRCULAR VARIABLE RESISTOR MC: 15501993872	BP501500	0	1500.00	0.00
34.	SOLENOID FOR AIR VALVE 110V DC MC: 15506991439	BB - 32 - III	10	7375.00	73750.00

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35.	MCCB, 415V, 3 PHASE, 200AMPS  MC: 94099990091		0	27500.00	0.00
36.	MCCB, 415V, 3 PHASE, 50AMPS  MC: 94096990106		7	24875.00	174125.00
37.	MCCB, 415V, 3 PHASE, 20AMPS  MC: 94096992613		0	24875.00	0.00
38.	HV CURRENT COLLECTOR SHOE ASSY (BHEL TYPE)  MC: 15501982007	44.6701	16	12000.00	192000.00
39.	SUPPORT INSULATOR (HV CURRENT COLLECTOR)  MC: 15506991142	SND.720.005	30	3200.00	96000.00
40.	LOW VOLTAGE RING TYPE CURRENT COLLECTOR ASSY (BHEL TYPE)  MC: 94096991684	K - 5AT	4	60000.00	240000.00
41.	LV CARBON BRUSH  MC: 15501955592	5TD554002	40	913.00	36520.00
42.	CONTACTOR ASSY, 3 POLE, 63 / 70AMPS, 400/440V, AC 50Hz, auxiliary contact - 2NO + 2NC, Holding coil voltage - 400/220V, AC 50Hz  MC: 94096071634		2	26250.00	52500.00
43.	CONTACTOR ASSY, 3 POLE, 32AMPS, 400/440V, AC 50Hz, auxiliary contact - 2NO + 2NC, Holding coil voltage -		6	14950.00	89700.00

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		Subtotal	20,51,828.00
		ED@12.50%	2,56,478.50
			23,08,306.50
		VAT @14%	3,23,162.91
		Total landed cost	26,31,469.41

Rounded off to Rs 26,31,469.00

**TERMS & CONDITIONS:-**

01	Price	Firm & FOR destination basis
02	Sales Tax	Extra. JVAT@14%.
03	ED/Ed. Cess	ED and cess there on shall be paid at actual at the rate ruling on the date of supply within the schedule delivery period against documentary evidence. Present rate of ED is 12.50 %. The excise invoice shall contain the provisions as per NIT for enabling BCCL to avail CENVAT Credit.
04	Frnt. & Ins.	To be borne by you
05	Payment	100 % payment within 21 days from the date of receipt and acceptance of materials or from the date of receipt of Bill whichever is later at consignee's end.
06	Delivery	Delivery of the 1 <sup>st</sup> Phase of the ordered items is to be completed within 01 to 04 months from the date of order. Delivery of 2 <sup>nd</sup> Phase will commence after items ordered in 1 <sup>st</sup> phase and subsequently delivery of 3 <sup>rd</sup> phase will be completed after supply of 2 <sup>nd</sup> phase. The delivery period for 2 <sup>nd</sup> & 3 <sup>rd</sup> phase will be within 01 to 03 months after completion of delivery of 1 <sup>st</sup> phase and 2 <sup>nd</sup> phase respectively. However, early delivery in each phase will be appreciated. Delivery shall be reckoned from the 10 <sup>th</sup> day of issue of order.
07	Warranty	18 months from the date of delivery or 12 months from the date of commissioning whichever is earlier.
08	Price Fall & L.D. Clause	Applicable as per Annexure-I. (enclosed)
09	After Sales Service	You shall provide after sales service as and when required.
10	Fitment Guarantee	The supplied item should be suitable for fitment to the subject accessories/ equipment/machine without any modification.
11	Submission of Bills	100% value of bill duly stamped & pre-receipted Bill in quadruplicate as per terms of the order should be submitted for payment to the paying

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