### PART-II

#### PRICE BID

- 1. **Annexure-A:** Charges for Preventive and Annual maintenance including load testing of EOT Cranes.
- 2. **Annexure-B:** Charges for Major Breakdown.
- 3. **Annexure-C.1:** Essential Spare List for Maintenance of Cranes.
- 4. **Annexure-C.2:** Cost Break-up for Major works/modifications/rectification/stand-by-duty/equipment.

# Charges for Preventive and Annual maintenance including load testing of EOT Cranes (Charges applicable for entire duration of contract.)

SI	Capacity of Crane in tonne (t) and Quantity of Cranes in Nos.	PPM quantity	Unit charge	Total charge
No			in Rs.	in Rs.
1.	Up to 1 t (04 nos.)	08		
2.	Above 1.1 t & up to 5 t (65 nos.)	130		
3.	Above 5.1 t & up to 10 t (19 nos.)	38		
4.	Above 10.1 t & up to 25 t (14 nos.)	28		
5.	Above 25.1 t & upto 50 t (01 no.)	02		
Charg	ses for ANNUAL MAINTENANCE (AM) including load testing/Crane	once in 12 mon	ths) in Rs.	
		AM with load		
		test, quantity		
6.	Up to 1 t (04 nos.)	08		
7.	Above 1.1 t & up to 5 t (65 nos.)	130		
8.	Above 5.1 t & up to 10 t (19 nos.)	38		
9.	Above 10.1 t & up to 25 t (14 nos.)	28		
10.	Above 25.1 t & upto 50 t (01 no.)	02		
11.	Additional man power supply to meet occasional and special operational and maintenance needs for supervisor, fitter, helper. However, number of person will be decided based on site	1800 hrs		
	conditions, tentatively 1800 hrs. Charges per man hour			
12.	Hired Welder on need basis. Cost per hour will be taken based on entry of person in main gate after CISF clearance; valid passes checking, fitness of person and clearance of their tools/machinery etc., tentatively 100 hrs, for site conditions in hours.	100 hrs		
	Charges per man hour			
	GST @ 18%			
	Total cost in Rs.			

- a. PPM one time in a year followed by AM along with load testing (AM = PPM+Load test).
- b. For Sl.no.: 11 & 12, the above estimated man hours and other scope are for two years and also it is only indicative. It may vary on person category and man hour, based on the site requirements. **The payment will be made only on actual quantity**.

#### **CHARGES FOR MAJOR BREAKDOWN \***

(Charges applicable for entire duration of contract.)

S1 No	Breakdown activity	Unit Charges
NO		in Rs.
1.	Gear Box Overhauling.	
a.	Up to 1 t	
b.	Above 1.1 t & up to 5 t	
c.	Above 5.1 t & up to 10 t	
d.	Above 10.1 t & up to 25 t	
e.	Above 25.1 t & upto 50 t	
2.	Opening and rectification of gears.	
a.	Up to 1 t	
b.	Above 1.1 t & up to 5 t	
c.	Above 5.1 t & up to 10 t	
d.	Above 10.1 t & up to 25 t	
e.	Above 25.1 t & upto 50 t	
3.	Load testing charges after major breakdown maintenance.	
a.	Up to 1 t	
b.	Above 1.1 t & up to 5 t	
c.	Above 5.1 t & up to 10 t	
d.	Above 10.1 t & up to 25 t	
e.	Above 25.1 t & upto 50 t	
4.	Servicing, replacing and restoring the condition of entire crane power lines	
	including subsystem and accessories and ensuring healthiness after alignment	
	checks etc., of each crane. ie., total work involved to restoration of the system.	
a.	Up to 1 t	
b.	Above 1.1 t & up to 5 t	
c.	Above 5.1 t & up to 10 t	
d.	Above 10.1 t & up to 25 t	
e.	Above 25.1 t & upto 50 t	
5.	Gear box shaft machining works including subsystem and accessories and	
	ensuring healthiness after alignment checks etc., of each crane. ie., total work	
_	involved to recondition of the system.	
a.	Up to 1 t	
b.	Above 1.1 t & up to 5 t Above 5.1 t & up to 10 t	
c. d.	Above 5.1 t & up to 10 t  Above 10.1 t & up to 25 t	
e.	GST 18 % Extra	
	GSI 18 % EXTR	

<sup>\*</sup> The Contractor shall also quote for other major breakdown activities not included in the above list as envisaged.

- a. Removing and bringing down any defective equipment/components such as motors, gearbox, brakes, shafts, wheels, couplings etc., from EOT crane for further repair is the responsibility of the contractor. The contractor shall also re-assemble the parts immediately after the repair. All kind of major breakdown service included service/replacement of sub components like 'O'ring, key, bush, coupling, gears etc.,
- b. The entire major break down activities shall be carried out with the prior clearance and duly approval of concerned user division engineer in-charge and its Division Head only and submitted to AMC focal point, safety division for payment clearance.
- c. If works arrived other than Sl.no.:1 to 5 mentioned along with subdivisions, the contractor has to deploy man power for rectification, stand by duty, occasion works, support works etc, the labour charges will be applicable as per the rates quotes in Annexure A.
- d. Gear Box shaft machining it is treated as single unit only. However, we recommend to service entire system like single shaft, double shaft & triple shaft etc., based on site conditions.

### ESSENTIAL SPARE LIST FOR THE MAINTENANCE OF CRANES $\underline{^{\star}}$

(Charges applicable for entire duration of contract.)

S1 No.	Description	@ Unit Price (in Rs.)
1.	Oil seal for LT, CT & MH Gear boxes, specification as per crane manufacturer and as per site.	
	Limit switch - Gravity Type, Rotary type for hoist specification as per crane manufacturer and	
2.	as per site. (Make: BCH/SOC/STROMKRAFT)	
_	Limit switch (flame proof) - Gravity Type, Rotary type for hoist specification as per crane	
2.a.	manufacturer and as per site conditions. Make: BCH, SOC, STROMKRAFT.	
3.	Limit switch- lever type for LT/CT (Make: SOC)	
3.a.	Limit switch (flame proof) - Lever type for LT/CT (Make: SOC) specification as per crane manufacturer and as per site conditions.	
4.	Brake liner with rivets and entire subcomponents/accessories, specification as per crane manufacturer an as per site. For various capacity of cranes as listed.	
4.a	Up to 1 t	
4.b	Above 1.1 t & up to 5 t	
4.c	Above 5.1 t & up to 10 t	
4.d	Above 10.1 t & up to 25 t	
4.e	Above 25.1 t & upto 50 t	
5.	Plummer block with bearings for CT/LT (Make: SKF/NBC/FAG), specification as per crane mand as per site. For various capacity of cranes as listed.	anufacturer
5.a	Up to 1 t	
5.b	Above 1.1 t & up to 5 t	
5.c	Above 5.1 t & up to 10 t	
5.d	Above 10.1 t & up to 25 t	
5.e	Above 25.1 t & up to 50 t	
Wheel	Bearing for CT/LT (Make: SKF/NBC/FAG) specification as per crane manufacturer and as per cranes as listed.	er site. For
5.f	Up to 1 t	
5.g	Above 1.1 t & up to 5 t	
5.h	Above 1.1 t & up to 10 t	
5.i	Above 3.1 t & up to 10 t	
5.j	Above 10.1 t & up to 25 t  Above 25.1 t & up to 50 t	
٥.j	EM brake (Make: PATHE) with entire subcomponents/accessories, specification as per crane ma	l anufacturer
6.	and as per site. For various capacity of cranes as listed.	I
6.a	Up to 1 t	
6.b 6.c	Above 1.1 t & up to 5 t	
6.d	Above 5.1 t & up to 10 t Above 10.1 t & up to 25 t	
	Above 10.1 t & up to 25 t Above 25.1 t & up to 50 t	
6.e		<u> </u>
7.	Hydraulic thrusters' brake (Make: SOC/STROMKRAFT) with entire subcomponents/a specification as per crane manufacturer and as per site. For various capacity of cranes as listed.	accessories,
7.a	Up to 1 t	
7.b	Above 1.1 t & up to 5 t	
	Above 5.1 t & up to 10 t	
7.c	<del>-</del>	
7.d	Above 10.1 t & up to 25 t	
7.e	Above 25.1 t & upto 50 t	
8.	Hot dip galvanised IWRC wire rope, range 5mm to 40 mm & above 40 mm (only indicative compound (Make: USHA MARTIN). It should be arranged by contractor based on capacity of the its specification as per site requirement.	
8.a	5 mm to 10 mm	
8.b	11 mm to 20 mm	
8.c	21 mm to 30 mm	
8.d	31 mm to 40 mm	
8.e	41 mm to 60 mm	
8.f	61 mm - 120 mm	
0.1	Gear box shaft (EN-9) with entire subcomponents/accessories as per crane manufacturer and	as per site
9.	requirement. For various capacity of cranes as listed.	per one
9.a	Up to 1 t	
	Above 1.1 t & up to 5 t	
9.b	Above 1.1 t & up to 3 t	Page <b>4</b> of <b>9</b>

	Above 5.1 t & up to 10 t	
9.c	Above 5.1 t & up to 10 t  Above 10.1 t & up to 25 t	
9.d	Above 10.1 t & up to 25 t  Above 25.1 t & up to 50 t	
9.e	Idler puller for main hoist (MH) with entire subcomponents/ accessories, as per crane	
10.	manufacturer and site requirement.	
	Spring for brake tension with entire subcomponents/accessories as per crane manufacturer	
11.	and site requirement.	
10	Brake shoe connecting linkage (as per crane manufacturer) with entire	
12. 13.	subcomponents/accessories, and site requirement. Rubber buffer standard, as per crane manufacturer and site requirement.	
14.	Brake oil (Transformer oil and as per crane manufacturer and site requirement)	
15.	Gear box oil (140 Grade oil and as per crane manufacturer and site requirement)	
	PVC sheathed, flexible cables with multi strand copper conductors' cable 4 C x 6 Sq.mm along	
16.	with subsystem and accessories and chain, as per crane manufacturer.	
16.a	PVC sheathed, flexible cables with multi strand copper conductors' cable 4Cx10 Sq.mm along with subsystem and accessories and chain, as per crane manufacturer and site conditions.	
10.a	PVC sheathed, flexible cables with multi strand copper conductors' cable 4 C x 4 Sq.mm along	
17.	with subsystem and accessories and chain, as per crane manufacturer.	
	PVC sheathed, flexible cables with multi strand copper conductors' cable 4 C x 2.5 Sq.mm	
18.	along with subsystem and accessories and chain, as per crane manufacturer.	
19.	PVC sheathed, flexible cables with multi core & multi strand copper conductors' cable of 24 C x 1.5 Sq.mm along with subsystem and accessories and chain, as per crane manufacturer.	
20.	Push button with conductors, as per crane manufacturer and site requirement.	
21.	Mushroom type button with lockable key, as per crane manufacturer and site requirement.	
22.	Indication lamp (24 V)	
23.	Indication lamp (110 V)	
24.	Indication lamp (230 V)	
25.	Power conductors along with HRC fuses (16 A)	
26.	Power conductors along with HRC fuses (32 A)	
27.	Power conductors along with HRC fuses (40 A)	
27.a	Power conductors along with HRC fuses (63 A)	
27.b	Power conductors along with HRC fuses (above 63 A) as per site availability	
28.	Emergency stop push button with conductors	
28.a	Changeover/selector switch with conductors	
29.	Relay for control – 6 V	
29.a	Relay for control - 6 V to 24 V	
30.	Power convertor – 24 V AC TO 24 V DC	
31.	Power convertor – 230 V AC TO 7.5 V DC	
32.	Resistor for Hoist - 500 Ohms	
32.a	Resistor for Hoist - upto 1000 Ohms	
33.	Hooter – 110 V AC	
34.	Hooter – 230 V AC	
35.	Hooter – 24 V AC	
36.	Hooter - 7.5 V DC	
37.	Variable speed drives and related spares - VVVF (Make: # EMERSON (control technique) / # L&T/ \$ NELCO/ \$ HITACHI/ # ABB/ # YASAKAWA /\$ DANFOSS /# SEW/# SIEMENS / \$ TELEMIC) to be supplied, and installed as per crane manufacturer, including first time programming being new item their subsystems and accessories, consulting and rendering service from OEM (if required) etc., as per site requirement.	
	of drive for Hoist motor	
37.a	Up to 1 t	
37.b	Above 1.1 t & up to 5 t Above 5.1 t & up to 10 t	
37.c 37.d	Above 5.1 t & up to 10 t  Above 10.1 t & up to 25 t	
37.d 37.e	Above 10.1 t & up to 25 t Above 25.1 t & upto 50 t	
	of drive for C.T motor	
37.f	Up to 1 t	
37.g	Above 1.1 t & up to 5 t	<u> </u>
37.h	Above 5.1 t & up to 10 t	
37.i	Above 10.1 t & up to 25 t	
37.j	Above 25.1 t & upto 50 t	

37.m Above 5.1 t 8 37.n Above 10.1 t 8 37.o Above 25.1 t 9 37.p Programming of VVVFD for Hoist, CT, LT as per crane manufacturer and site requires 37.p1 Supply of programming – single handheld workstation (laptop) DELL/HP/SONY technology including accessories and with rated UPS, tripod-based screening aid (so colour printer with one spare toner/cartridge apart with working (HP/Canon) and system along with accessories, suitable stands, cooling and carry unit, charged system as per site condition. in LOT.  37.p2 Supply of portable power station above 1500w, 756wh, LPF battery as per site conditions. 37.p3 Supply of collapsible support for examine and displaying the cured system as condition. in Nos.  37.p4 Supply of single-phase single cylinder air compressor (Make: ELGI), 230 v., so reciprocating type, Reservoir cap.: 100 L, Delivery: 4.194 CFM, Pr.: 10 ksc, Speed: 12	& up to 25 t & upto 50 t ement. Y of recent tand), laser ad projector cable audio ion. in Nos.
37.n Above 1.1 t 37.m Above 5.1 t 8 37.n Above 25.1 t 8 37.p Programming of VVVFD for Hoist, CT, LT as per crane manufacturer and site require 37.p1 Supply of programming – single handheld workstation (laptop) DELL/HP/SON technology including accessories and with rated UPS, tripod-based screening aid (s colour printer with one spare toner/cartridge apart with working (HP/Canon) an system along with accessories, suitable stands, cooling and carry unit, charge system as per site condition. in LOT.  37.p2 Supply of portable power station above1500w, 756wh, LPF battery as per site condition. 37.p3 Supply of collapsible support for examine and displaying the cured system a condition. in Nos.  37.p4 Supply of single-phase single cylinder air compressor (Make: ELGI), 230 v., s reciprocating type, Reservoir cap.: 100 L, Delivery: 4.194 CFM, Pr.: 10 ksc, Speed: 12	& up to 5 t  & up to 10 t  & up to 25 t  & up to 50 t  ement.  Y of recent tand), laser ad projector eable audio  ion. in Nos.
37.n Above 5.1 t 8 37.n Above 10.1 t 8 37.p Programming of VVVFD for Hoist, CT, LT as per crane manufacturer and site require 37.p1 Supply of programming – single handheld workstation (laptop) DELL/HP/SONY technology including accessories and with rated UPS, tripod-based screening aid (s colour printer with one spare toner/cartridge apart with working (HP/Canon) an system along with accessories, suitable stands, cooling and carry unit, charge system as per site condition. in LOT.  37.p2 Supply of portable power station above1500w, 756wh, LPF battery as per site condition 37.p3 Supply of collapsible support for examine and displaying the cured system a condition. in Nos.  37.p4 Supply of single-phase single cylinder air compressor (Make: ELGI), 230 v., s reciprocating type, Reservoir cap.: 100 L, Delivery: 4.194 CFM, Pr.: 10 ksc, Speed: 12	& up to 10 t & up to 25 t & up to 25 t & up to 50 t  ement.  Y of recent tand), laser ad projector eable audio  ion. in Nos.
37.n Above 10.1 t 8 37.o Above 25.1 t 0 37.p Programming of VVVFD for Hoist, CT, LT as per crane manufacturer and site require 37.p1 Supply of programming – single handheld workstation (laptop) DELL/HP/SONY technology including accessories and with rated UPS, tripod-based screening aid (s colour printer with one spare toner/cartridge apart with working (HP/Canon) an system along with accessories, suitable stands, cooling and carry unit, charge system as per site condition. in LOT.  37.p2 Supply of portable power station above1500w, 756wh, LPF battery as per site condition 37.p3 Supply of collapsible support for examine and displaying the cured system a condition. in Nos.  37.p4 Supply of single-phase single cylinder air compressor (Make: ELGI), 230 v., s reciprocating type, Reservoir cap.: 100 L, Delivery: 4.194 CFM, Pr.: 10 ksc, Speed: 12	& up to 25 t & up to 25 t & up to 50 t  ement. Y of recent tand), laser ad projector cable audio  ion. in Nos.
<ul> <li>37.p Programming of VVVFD for Hoist, CT, LT as per crane manufacturer and site requires</li> <li>37.p1 Supply of programming – single handheld workstation (laptop) DELL/HP/SONY technology including accessories and with rated UPS, tripod-based screening aid (so colour printer with one spare toner/cartridge apart with working (HP/Canon) and system along with accessories, suitable stands, cooling and carry unit, charges system as per site condition. in LOT.</li> <li>37.p2 Supply of portable power station above 1500w, 756wh, LPF battery as per site conditions.</li> <li>37.p3 Supply of collapsible support for examine and displaying the cured system a condition. in Nos.</li> <li>37.p4 Supply of single-phase single cylinder air compressor (Make: ELGI), 230 v., so reciprocating type, Reservoir cap.: 100 L, Delivery: 4.194 CFM, Pr.: 10 ksc, Speed: 12.</li> </ul>	ement. Y of recent tand), laser and projector eable audio ion. in Nos.
<ul> <li>Supply of programming – single handheld workstation (laptop) DELL/HP/SONY technology including accessories and with rated UPS, tripod-based screening aid (scolour printer with one spare toner/cartridge apart with working (HP/Canon) and system along with accessories, suitable stands, cooling and carry unit, charge system as per site condition. in LOT.</li> <li>Supply of portable power station above 1500w, 756wh, LPF battery as per site conditions.</li> <li>Supply of collapsible support for examine and displaying the cured system a condition. in Nos.</li> <li>Supply of single-phase single cylinder air compressor (Make: ELGI), 230 v., so reciprocating type, Reservoir cap.: 100 L, Delivery: 4.194 CFM, Pr.: 10 ksc, Speed: 12</li> </ul>	Y of recent tand), laser ad projector eable audio
<ul> <li>37.p1 Supply of programming – single handheld workstation (laptop) DELL/HP/SONY technology including accessories and with rated UPS, tripod-based screening aid (scolour printer with one spare toner/cartridge apart with working (HP/Canon) and system along with accessories, suitable stands, cooling and carry unit, charge system as per site condition. in LOT.</li> <li>37.p2 Supply of portable power station above 1500w, 756wh, LPF battery as per site condition.</li> <li>37.p3 Supply of collapsible support for examine and displaying the cured system a condition. in Nos.</li> <li>37.p4 Supply of single-phase single cylinder air compressor (Make: ELGI), 230 v., so reciprocating type, Reservoir cap.: 100 L, Delivery: 4.194 CFM, Pr.: 10 ksc, Speed: 12</li> </ul>	Y of recent tand), laser ad projector eable audio
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reciprocating type, Reservoir cap.: 100 L, Delivery: 4.194 CFM, Pr.: 10 ksc, Speed: 12	-
rpm, Power: 1 HP, Safety relief valve set pr.: 11.5 bar, Pr. switch set pr.: 3-6 mounted type along critical spares, and standard pneumatic impact wrench (size:1 Ingco/Elephant) with suitable sockets and connectors as per site condition in LOT.	200 & 1420 bar, wheel
37.q Supply of control card for LT, CT, Hoist as per crane manufacturer and site requirem	nent.
37.r Drive operating panel as per crane manufacturer and site requirement.	
37.s Servicing, restoration & installation of VVFD's including replacement of con accessories etc., as per crane manufacturer specification along with handling consulting and rendering service from OEM (if required) etc., as per site requirement	g/transporting/packing,
37.s1	Up to 1 t
	& up to 5 t
37.s3 Above 5.1 t 8	
37.s4 Above 10.1 t 8	
37.s5 Above 25.1 t	
Rewinding of power transformer (including all spares like coil, bearings, O-ring, gask warranty period for 12 months from the date of rewinding work) subcomponents/accessories, as per crane manufacturer and site requirement.	
38.a Rewinding of 400	0 V to 7.5 V
38.b Rewinding of 40	
38.c Rewinding of 400	
38.d Rewinding of 400	
Motor rewinding (including all spares like coil, bearings, O-ring, gaskets etc., certif 12 months from the date of rewinding) along with entire subcomponents and accommanufacturer and site requirement.	fied with a warranty for cessories, as per crane
	HP to 5 HP
39.b Capacity 5.1 F	
39.c Capacity 10.1 F	
39.d Capacity 15.1 F	
39.e Capacity 20.1 HE  EHT brake alignment, rewinding, re-conditioning (including all spares like coil, bear lining, O-ring, gaskets etc., certified with a warranty for 12 months from the conditioning) along with entire subcomponents/accessories as per crane manufacture requirement.	rings, brake date of re-
	Up to 1 t
40.a	
40.a Above 1.1 t	
40.b Above 1.1 t	=
40.b Above 1.1 t 40.c Above 5.1 t 8	% up to 10 t
40.b Above 1.1 t	% up to 10 t % up to 25 t
40.b Above 1.1 t 40.c Above 5.1 t 8 40.d Above 10.1 t 40.e Above 25.1 t 41. EM brake alignment, rewinding, re-conditioning (including all spares like coil, bearing gaskets etc., certified with a warranty of 12 months from the date of re-conditions subcomponents/accessories as per crane manufacturer and site requirement.	& up to 10 t & up to 25 t & up to 50 t  ng, brake lining, O-ring, ning) along with entire
40.b Above 1.1 to Above 5.1 to Above 5.1 to Above 5.1 to Above 5.1 to Above 40.d Above 10.1 to Above 25.1 to Above	& up to 10 t & up to 25 t & up to 50 t  mg, brake lining, O-ring, oning) along with entire  Up to 1 t
40.b Above 1.1 t 40.c Above 5.1 t 8 40.d Above 10.1 t 8 40.e Above 25.1 t 8 41. EM brake alignment, rewinding, re-conditioning (including all spares like coil, bearing gaskets etc., certified with a warranty of 12 months from the date of re-conditions subcomponents/accessories as per crane manufacturer and site requirement. 41.a 41.b Above 1.1 t	& up to 10 t & up to 25 t & up to 50 t  mg, brake lining, O-ring, oning) along with entire  Up to 1 t & up to 5 t
40.b Above 1.1 to Above 5.1 to Above 5.1 to Above 5.1 to Above 5.1 to Above 40.d Above 10.1 to Above 25.1 to Above	& up to 10 t & up to 25 t & up to 50 t  ang, brake lining, O-ring, oning) along with entire  Up to 1 t & up to 5 t & up to 10 t

4.1	A1 05110 1 501		
41.e	Above 25.1 t & upto 50 t		
	Gear box Over hauling (including all spares like gear oil of suitable grade, gears, shaft housi	ng, O-ring,	
42.	gaskets etc. duly certified with a warranty of 12 months from the date of re-conditioning) along with entire		
12.		WICH CHICK	
	subcomponents/accessories as per crane manufacturer and site requirement.	1	
42.a	Up to 1 t		
42.b	Above 1.1 t & up to 5 t		
42.c			
	Above 5.1 t & up to 10 t		
42.d	Above 10.1 t & up to 25 t		
42.e	Above 25.1 t & upto 50 t		
12.0			
43.	Crane history board/custodian board (1.5 ft x 2 ft metallic board). Format will be shared after		
то.	awarding contract.		
44.	Chain (Metal & acid resistance, etc.) specification as per site. For various capacity of cranes.		
11.	Festooning trolley (Metal & Plastic & acid resistance, etc.) as per crane manufacturer and site		
45.			
	requirement. For various capacity of cranes.		
4.5	Current collector 3 Phase, specification as per crane manufacturer and site requirement. For		
46.	various capacity of cranes.		
	various capacity of crancs.		
47.	Safety Latch for crane hook including accessories as per crane manufacturer and site		
	requirement.		
4.0	Crane Pendent box (non-flameproof) - total unit along with subsystem and accessories as per		
48.	crane manufacturer and site requirement.		
-	C. D. L. L. D. C. L.		
	Crane Pendent box (Flame proof) - total unit along with subsystem and accessories as per		
48.a	crane manufacturer and site requirement.		
	Crane Pendent box (ATEX certified) - total unit along with subsystem and accessories as per		
48.b	crane manufacturer and site requirement.		
40.0			
49.	Radio frequency with remote controller - total unit along with subsystem and accessories as per		
тэ.	crane manufacturer and site requirement.		
	Anti-collision sensor along with wiring, calibration, replacement etc., for various capacities of		
50.	cranes, total unit along with subsystem and accessories as per crane manufacturer and site		
50.			
	requirement.		
F 1	Service/repairing - damage electrical/Instrumentation cabinet/panel door as per crane manufa	ecturer and	
51.	site requirement.		
51.a	Up to 1 t		
51.b	Above 1.1 t & up to 5 t		
51.c	Above 5.1 t & up to 10 t		
51.d	Above 10.1 t & up to 25 t		
51.e	Above 25.1 t & upto 50 t		
31.6		1	
52.	Replacement of damaged electrical/Instrumentation cabinet/panel door as per crane manufactur	rer and site	
02.	requirement.		
52.a	Up to 1 t		
52.b	Above 1.1 t & up to 5 t		
52.c	Above 5.1 t & up to 10 t		
52.d	Above 10.1 t & up to 25 t		
52.e	Above 25.1 t & upto 50 t		
53.	4 pole Mini Circuit Breaker (MCB) as per crane manufacturer and site requirement.		
53.a	32 A		
53.b	63 A		
54.	Switch amplifier (isolation barrier) as per crane manufacturer and site requirements.		
	High Rupturing Capacity (HRC) fuse (Type: Pin & Screw and for any new suitable type) as	ner cronc	
		per crane	
55.	manufacturer and site requirements.		
55.a	10 amps		
55.b	16 amps		
55.c	20 amps		
55.d	32 amps		
55.e			
	40 amps		
55.f	40 amps		
55.f	40 amps 63 amps		
55.f 56	40 amps 63 amps Down Shop Lead (DSL) Busbar as per crane manufacturer and site requirements.		
56	40 amps 63 amps Down Shop Lead (DSL) Busbar as per crane manufacturer and site requirements. in meters		
	40 amps 63 amps Down Shop Lead (DSL) Busbar as per crane manufacturer and site requirements.	rements.	
56 57	40 amps 63 amps Down Shop Lead (DSL) Busbar as per crane manufacturer and site requirements. in meters Down Shop Lead (DSL) Busbar support hanger clamps as per crane manufacturer and site requirements.	rements.	
56 57 57.a	40 amps 63 amps Down Shop Lead (DSL) Busbar as per crane manufacturer and site requirements. in meters Down Shop Lead (DSL) Busbar support hanger clamps as per crane manufacturer and site requirements. single pole	rements.	
56 57 57.a 57.b	40 amps 63 amps Down Shop Lead (DSL) Busbar as per crane manufacturer and site requirements. in meters Down Shop Lead (DSL) Busbar support hanger clamps as per crane manufacturer and site requirements.  single pole three pole	rements.	
56 57 57.a	40 amps 63 amps Down Shop Lead (DSL) Busbar as per crane manufacturer and site requirements. in meters Down Shop Lead (DSL) Busbar support hanger clamps as per crane manufacturer and site requirements. single pole	rements.	
56 57 57.a 57.b	40 amps 63 amps Down Shop Lead (DSL) Busbar as per crane manufacturer and site requirements. in meters Down Shop Lead (DSL) Busbar support hanger clamps as per crane manufacturer and site requirements.  single pole three pole	rements.	

- \* The contractor shall <u>also quote for other spares not included</u> in the above list as envisaged for smooth operation of cranes. The list given above is only bare essential and <u>only indicative</u>, the payment will be made only for actual quantity utilised, <u>no payment will be made for spares kept in stock</u> by AMC team (in IPRC).
- **\$** # The contractor scope of work includes <u>Sl.no 1 to 57</u> along with subdivisions, towards supply of spares, control card and programming of VVVF drive, service and restoring, including accessories, consulting and rendering service from OEM (if required) etc., and also for any new upcoming drive (\$) makes on need basis. If **any models found outdated**, before replacement contractor has to <u>submit the documentary evidence from OEM</u> about the outdated model and <u>clearance for appropriate new model</u> which is suitable for site requirements.
- # Makes are in usage, \$ Makes upcoming.
- Parties have to quote from Sl.no. 1 to 57 along with subdivisions clearly and to bifurcate the other spares separately as above said.
- All the spares should comply with relevant standards along with OEM authorisation, relevant test certificates wherever applicable and to be submitted along with spares.
- The contractor shall clearly indicate the rates for the restoring works, spares, programming and onsite installation of # VVVF drives and also for upcoming drives by OEM.
- All the spares mentioned shall be replaced without any extra service cost including for IPRC issued items (on need basis).
- All the spares mentioned to be replaced only as per manufacturer specification, site requirement and approval of department authorities.
- All spares supplied and utilised should cover the standard warranty/guarantee period, Third party Inspections if applicable.
- @ Units in meters, litre, numbers, lot suitably as applicable (for oil, oil seal, cable, buttons, chain, fuse, clamps, panel, breaker, bearing, pendant, card, switch, sensor, rewinding, alignment, drives, programming etc).

## COST BREAK-UP FOR MAJOR WORKS / MODIFICATIONS/ RECTIFICATION /ROUTINE /EQUIPMENT/INSPECTION etc., Charges applicable for entire duration of contract.

SI	Category	Unit
No		Charges
1		in Rs.
1.	Hired Welding set with entire set of consumable and accessories. Gas cutting set with entire set of consumable and accessories (including Oxygen cylinder and acetylene	
	cylinder) on need basis. Cost per hour will be taken based on entry of vehicle in main gate	
	after CISF clearance, fitness of person, valid passes checking, fitness of equipment/	
	machineries etc. If any vehicle involved in handling these equipments/machinery valid	
	permit system / security checks to be strictly adhered as per IPRC protocols in hours.	
	Charges per day	
2.	Hired Forklift with operator and necessary accessories for load testing on need basis. Cost	
	per hour will be taken only based on entry of vehicle in main gate after CISF clearance,	
	fitness of person, valid passes checking and ensuring fitness of vehicle, based on capacity	
	of the vehicle required for site <u>conditions in hours</u> .	
	Charges per day	
3.	Hired Hydra with operator and necessary accessories for load testing on need basis. Cost	
	per hour will be taken only based on entry of vehicle in main gate after CISF clearance,	
	fitness of person, valid passes checking and ensuring fitness of vehicle, based on capacity of the vehicle required for site <u>conditions in hours</u> .	
	Charges per day	
4.	Hired Truck/trailer/tractors with operator and necessary accessories for load testing on	
	need basis. Cost per hour will be taken only based on entry of vehicle in main gate after	
	CISF clearance, fitness of person, valid passes checking and ensuring fitness of vehicle,	
	based on capacity of the vehicle required for site <u>conditions in hours</u> .	
	Charges per day	
5.	Establishing scaffolding - height based on field requirement. However, the in-house	
	equipments like forklift/scissor lifts/height raisers etc., shall be provided up to rated	
	specification. Charges per meter until completion.	
5.a 5.b	up to 8 meter above 8 to 12 meters	
5.c	above 8 to 12 meters above 13 to 16 meters	
5.d	above 15 to 16 meters above 16 to 25 meters	
5.e	above 16 to 25 meters	
6.	Minor painting works like touch-up/patch works on rusted areas based on requirement,	
0.	tentatively 2000 sq.mtr.	
	Charges per Sq.mtr.	
7.	Inspection charges for new cranes towards ensuring the configuration, fitness and offering	
	preliminary inspection of the crane before taking into scope of AMC.	
	Unit charge in Rs.	
7.a	Upto 1 t	
7.b	Above 1.1 t & upto 5 t	
7.c	Above 5.1 t & upto 10 t	
7.d	Above 10.1 t & upto 25 t	
7.e	Above 25.1 t & upto 50 t	
	GST 18 % Extra	

- a) The above man hour, man days, unit charge and other scope are only indicative. It may vary person category and man-hours, days etc, may be added/deleted based on the site requirement.
- b) The need of hired man power with industrial heavy vehicle (Sl.no: 2 to 4) requirement based on need when IPRC resource/vehicles not in position to extend support. However, contractor has to give rate for those vehicles with operator with necessary consumables and accessories related to the assigned work. The working hours will be calculated from the time of clearing main gate entry after security checks and by reporting time in site. In case of vehicle delay arises after entry due to technical issues, payment will be made only on hourly basis for the reported day.