

**Tools & Plants and Test Equipment for 66 kV ETC work**

**List of minimum tools, tackles and testing equipments required on ownership basis is as under:**

<b>Description</b>	<b>Qty Owned</b>
<b>TOOLS AND TACKLES</b>	
1. Electrical hand drilling machine	2
2. Hydraulic bending Machine for Al- pipes of 150 mm diameter, wall thickness 10 mm.	-
3. Gas welding and Gas cutting set.	1
4. Hand operated / motorized winch machine	
a) 10T	-
b) 5T	1
5. Electric welding M/C	2
6. Hydraulic Jack, 100 T	-
7. Jack for cable support	1
8. Dynamometer	1
9. Tig welding M/C for A1	-
10. Hydraulic crimping tools for Al conductor	1
11. Hydra, 10T, 10m boom	-
<b>Testing Instruments</b>	
1. Digital multimeter 3 & half digits accuracy 0.5%, any reputed make.	04
2. Digital multimeter 4 & half digits accu. 0.5%, any reputed make.	1
3. Analogue multimeter any reputed make .	1
4. Megger 0-500V, 5000MOHM	1
5. Megger 0-5000 V, 20,000 MOHM	1
6. Single phase variac 8 A, 0-250 v, 50HZ	1
7. Three phase variac 15 A, 0-500V, 50HZ	1
8. Single phase transformer 220V/5000v –1KVA, 50HZ.	1
9. Phase sequence meter	1
10. Stop watch	1
11. Digital tongue tester 0-2000A – A.C. / D.C. 600 V A.C/D.C, 10 mA resolution	1
12. Digital tongue tester 0 – 200A AC, 600V AC 50 Hz, 0.01 mA resolution	1
13. Secondary injection kit, 0 – 100A.C at 24VA.C, Voltage 0 -400 V A.C.	1
14. Variable D.C source 0- 220 D.C, 10 A	1
15. Ductor 100 Amp. D.C.	1
16. Earth resistance tester	1

Certification of tenderer for having above Tools Plants & Testing equipment on ownership basis.

**(SIGNATURE OF TENDERER)  
WITH STAMP**

**Tools & Plants and Test Equipment for 220 kV ETC work**

**List of minimum tools, tackles and testing equipments required on ownership basis is as under:**

<b>TOOLS AND TACKLES</b>	<b>Description</b>	<b>Qty Owned</b>
1.	Electrical hand drilling machine	4
2.	Hydraulic bending Machine for Al- pipes of 150 mm diameter, wall thickness 10 mm.	1
3.	Gas welding and Gas cutting set.	2
4	Hand operated / motorized winch machine	
a)	10T	-
b)	5T	2
5.	Electric welding M/C	3
6.	Hydraulic Jack, 100 T	1
7.	Jack for cable support	4
8.	Dynamometer	1
9.	Tig welding M/C for A1	1
10.	Hydraulic crimping tools for Al conductor	1
11.	Hydra, 10T, 10m boom	1
<b>Testing Instruments</b>		
1.	Digital multimeter 3 & half digits accuracy 0.5%, any reputed make.	06
2.	Digital multimeter 4 & half digits accu. 0.5%, any reputed make.	2
3.	Analogue multimeter any reputed make .	2
4.	Megger 0-500V, 5000MOHM	2
5.	Megger 0-5000 V, 20,000 MOHM	2
6.	Single phase variac 8 A, 0-250 v, 50HZ	2
7.	Three phase variac 15 A, 0-500V, 50HZ	2
8.	Single phase transformer 220V/5000v –1KVA, 50HZ.	2
9.	Phase sequence meter	2
10.	Stop watch	2
11.	Digital tongue tester 0-2000A – A.C. / D.C. 600 V A.C/D.C, 10 mA resolution	2
12.	Digital tongue tester 0 – 200A AC, 600V AC 50 Hz, 0.01 mA resolution	2
13.	Secondary injection kit, 0 – 100A.C at 24VA.C, Voltage 0 -400 V A.C.	1
14.	Variable D.C source 0- 220 D.C,10 A	2
15.	Ductor 100 Amp. D.C.	1
16.	Earth resistance tester	1

**(SIGNATURE OF TENDERER)  
WITH STAMP**