

**Annexure –I**

**Tools & Plants and Test Equipment for 400 kV ETC work**

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

Description	
<b>TOOLS AND TACKLES</b>	<b>Qty Owned</b>
1. Electrical hand drilling machine	6
2. Hydraulic bending Machine for Al- pipes of 150 mm diameter, wall thickness 10 mm.	1
3. Gas welding and Gas cutting set.	4
4. Hand operated / motorized winch machine	
a) 10T	2
b) 5T	4
5. Electric welding M/C	6
6. Hydraulic Jack, 100 T	2
7. Jack for cable support	6
8. Dynamometer	2
9. Tig welding M/C for A1	1
10. Hydraulic crimping tools for Al conductor	2
11. Hydra, 10T, 10m boom	1
<b>TESTING INSTRUMENTS</b>	
1. Digital multimeter 3 & half digits accuracy 0.5%, any reputed make.	18
2. Digital multimeter 4 & half digits accu. 0.5%, any reputed make.	6
3. Analogue multimeter any reputed make .	4
4. Megger 0-500V, 5000MOHM	4
5. Megger 0-5000 V, 20,000 MOHM	2
6. Single phase variac 8 A, 0-250 v, 50HZ	6
7. Three phase variac 15 A, 0-500V, 50HZ	2
8. Single phase transformer 220V/5000v –1KVA, 50HZ.	2
9. Phase sequence meter	4
10. Stop watch	4
11. Digital tongue tester 0-2000A – A.C. / D.C. 600 V A.C/D.C, 10 mA resolution	4
12. Digital tongue tester 0 – 200A AC, 600V AC 50 Hz, 0.01 mA resolution	4
13. Secondary injection kit, 0 – 100A.C at 24VA.C, Voltage 0 -400 V A.C.	2
14. Variable D.C source 0- 220 D.C,10 A	3
15. Ductor 100 Amp. D.C.	2
16. Earth resistance tester	2

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

**(SIGNATURE OF TENDERER)  
WITH STAMP**