

Annexure –IV

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 | Qty Owned |
|--|-----------|
| TOOLS AND TACKLES | |
| 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 |
| TESTING INSTRUMENTS | |
| 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**