

Appendix - IV

LIST OF MAJOR T&P USED IN TOWER ERECTION & STRINGING

List of Major T&P used in Tower Erection & Stringing

Sl No	Item Discription	Broad Technical Parameters & Standards
1	Derrick Pole	Made of seamless steel pipe: Material confirming to IS:1161, Grade Yst 240
		For 220kV & 132kV: ID-116 mm, OD-127mm, Thickness 5.4mm, Length 6m/9m (6+3)
		For 400kV & 765kV: ID-155mm, OD-168.30 mm, Thickness 8mm, Length 6m/9m(6+3)/12m (6+6)
2	Gin Pole	Made of high-tensile aluminum and have swivel head & base. Length 12 to 24 m .Breaking strength 100/80/16kN with lifting capacity of 50/40/8kN.
3	Motorised Power Winch	As per IS 9507
4	Hydraulic Power Winch	Maximum pull capacity of 35kN with negative breaking system, independent mechanical stabilizer (front & rear) and emergency stop push button.
5	Single sheave Pulley close & open type	Conforming to IS:13156, Withstand load - 8 MT(min.)
6	Double sheave Pulley	Conforming to IS:13156, Withstand load - 5/10 MT(min.)
7	"D" Shackle	FORGED SHACKLES, IS/ISO 2415, Minimum Ultimate Strength - 5/8/10 T
8	Steel Wire rope	Steel wire rope DIA - 16/18/20 mm Conforming to IS 2266
9	PP (Polypropylene) Rope	Dia- 12 mm/16 mm/18 mm/20 mm/22mm/24 mm Conforming to IS 5175
10	Turn Buckle	Confirming to IS:3121,
11	Trifor - (For tower erection with Gin pole)	Confirming to IS 5604
12	Motorised Joint Machine	Light weight 100 T – for Zebra/ Moose Conductor & Earthwire and 120 T – Bersmis/ Lapwing Conductor
13	Single sheave aerial rollers	Dia. 300/450/660 mm Sheaves - Al alloy mounted on ball bearing Frames - Mild Steel
14	Three sheave aerial rollers	Side Rollers - Al alloy Centre Rollers - Al alloy or Mild Steel
15	Five Sheave aerial Rollers	Frames - Mild Steel
16	Seven Sheave Rollers	
17	TSE - TWIN/QUAD/HEXA Bundle	Capacity of TSE 8T for Twin Bundle, 16T for Quad Bundle & 24T for Hexa Bundle with negative hydraulic brakes for safety.
18	Sagging Platform	Superior Aluminium Alloy in trapezoidal structure with antifall barrier.
19	EarthWire Roller	Steel Sheave mounted on Double Ball Bearing.
20	Head Board - OPGW	Frames - Mild Steel, Front & Back Tail with Pin - High Tensile Steel
21	Head Board - Twin/Quad/Hexa	Made with heat treated alloy steel
22	Pilot Wire	Anti-Twisting Galvanized Braided Steel Rope 16 mm, 18mm for Twin Moose , 22mm for Quad Moose, 28 mm for Hexa Lapwing -800kV Stringing.
23	Four sheave Pulley	Material Conforming to IS:13156
24	Turn Table	Earth Wire-3 MT, Conductor-SMT
25	Equilizer Pulley	Material Conforming to IS:13156, Capacity - 10/15 MT
26	Single End Socks Conductor	High Tensile Galvanized Steel Wires
27	Double End Socks Conductor	High Tensile Galvanized Steel Wires
28	Drum Lifting Jack	Frame Material- M. S. Pipe, Class C
29	Bull Dog Clamp - 18mm	Conforming to IS:2361

Sl No	Item Discription	Broad Technical Parameters & Standards
30	Spacer Cycle /Trolley	Made of light Aluminium alloy material .
31	Ratchet Lever Hoist	IS:11340
32	Swivel/Articulate Joint	Made with High Tensile steel, 3/11/22/36 MT (BL)
33	Bolted Come Along Clamp - E/W & Conductor	Body - SG Iron Hook & Eye Bolt - HT steel Liners - Al Alloy

Note: Above technical parameters indicate the basic minimum requirements of T&Ps. All T&Ps shall confirm to Indian standards, wherever applicable. Other International standards, which ensure equal or better properties/performance shall also acceptable.