

ATTACHMENT – H

I. REC CONSTRUCTION STANDARDS

1. REC Construction Standard No. A-1 (Protective Guarding across the Road)

Following footnote shall be added in the drawing:

“i) Protective Guarding shall also be used where 11 kV line traversing through inhabited localities.

ii) For special crossing like rivers, highways etc. lattice structure of suitable design shall be used.”

2. REC Construction Standard No. A-4 (Supports-line without Earth wire) and A-5 (Supports-line with Earth wire)

Following shall be added as Note:

“For the purpose of pole embedding pit size shall be 600x500x1500 (mm) and the pole foundation details shall be as under:

- i) For loose soil: Pit to be back-filled with Jhama (Burnt Brick) and excavated earth.
- ii) For normal soil: Pit to be back-filled with excavated earth.”

3. REC Construction Standard No. E-28 (LT Service Connectors)

Following shall be added as Note:

“As an alternative to the LT service connectors specified in E-28, Universal Distribution Connectors can also be used, details of which is available at E – 28A.”

E – 28A is placed at Annexure – 1

4. REC Construction Standard No. G-1 (Guy Assembly – Conventional Arrangement)

Following footnote shall be added in the drawing:

“The Size of the stay pit should be 500mmx500mmx1600mm with concrete mix of 1:2:4 having volume in stay pit of 800x500x500=0.2

CUM for embedding the stay plate assembly and the balance pit to be filled with earth duly rammed. In case of firm soil, concreting is not required.”

5. REC Construction Standard No. J-1 (Coil Earthing) and J-2 (Pipe/Rod Earthing)

Following footnote shall be added in the drawing:

“No Charcoal or Coke and Salt will be used in case of marshy soil and where water table is high.”

6. REC Construction Standard No. L-1 (33/11 kV S/S Standard Layout – Outdoor 11 kV Switchgear) and L-2 (33/11 kV S/S Standard Layout – Indoor 11 kV Switchgear)

The note at serial number 1 shall be replaced by the following:

“1. 33 kV circuit breaker (shown dotted) shall be used when the transformer capacity is 1 MVA and above. 33 kV HRC fuses shall be used for transformers smaller than 1 MVA.”

7. REC Construction Standard No. M-1 (V Cross Arm)

Following shall be added as Note:

“The MS Strip of 100x50x5 mm shall be welded for providing additional mechanical strength at the seat of the pin insulator as done in case of 11 KV ‘V’ X Arm (A-6).”

8. REC Construction Standard No. M –7 (33 kV lines- arrangement of Conductors at angle locations single pole support)

Following shall be added as Note:

“For the purpose of clamping of conductor in case of strain insulators the clamping arrangement as specified in drawing available at M-7A shall be used”

M-7A is placed at Annexure-2

E – 28A: SPECIFICATION OF UNIVERSAL DISTRIBUTION CONNECTORS

- 1.0 The wedge type Universal Distribution Connector will consist of locking insert made from a special Aluminum alloy of high ductility and electrical conductivity, which can be easily removed by screwdriver. When connected, this will provide a tenable electrical and mechanical connection for solid, stranded or compressed conductor combinations including AAC, AAC & ACSR. The typical installation procedure of wedge type connectors has been illustrated at attached Annexure –1A.
- 2.0 The dimensions for the wedge shall be manufactured to close tolerances to ensure repeatability and reliability of the connection.
- 3.0 All sharp edges and burrs shall be removed.
- 4.0 The wedges shall be burnished to achieve optimum surface roughness for electrical contact.
- 5.0 The wedge connector shall meet the current cycle test requirements as per ANSI, C 119.4-1998 Class AA. When connected as specified, samples shall indicate electrical stability for terminated connectors. The resistance of connection, when measured as specified shall be stable through out test. The samples shall be tested to 500 on/off current cycles with the control conductor raised between 175 C to 180 C above ambient.
- 6.0 The wedge connector shall meet the mechanical requirements as per ANSI C 119.4-1998 Class 3, minimum tension. When tested as specified or 5% of the rated cable strength of the weaker conductor.
- 7.0 The wedge connector shall meet the following thermal shock/salt spray test.
 - a) Hours at 150 C
 - b) 15 minutes at 0 C water, immediately from the oven
 - c) 30 minutes at 150 C.
 - d) 20.75 hours at room temperature
- 8.0 Salt spray corrosion, samples shall be subjected to a 30 day salt spray corrosion test. Each daily exposure shall consist of:
 - a) 15 hours in 5% salt spray atmosphere
 - b) 1 hour in a drying oven at 100 C.
 - c) 8 hours at room temperature.
- 9.0 The supplier also shall supply marine atmospheric environmental study on the performance of their products, minimum 4 years duration.