

**JODHPUR VIDYUT VITRAN NIGAM LIMITED, JODHPUR  
OFFICE OF THE SUPERINTENDING ENGINEER (COMML.)**

No. Jdvvn/ C&MD/CE(CPM)/SE(COMML)/ CII/ F- D. 2059 dt. 20.12.2003

**ORDER**

Sub:- Remedial measures to be taken by the field officers to avoid electrical accidents of the lines, sub stations etc.

In the Jaipur City and adjoining areas three electrical accidents had occurred in quick succession in July' 2003.

After detailed enquiry, the matter was considered by the Regulatory Commission and it was desired to issue necessary instructions to the field officers to avoid recurrence of accidents. Accordingly, following instructions are issued for compliance by the field officers.

1. Wherever Battery set/Battery charger have been provided at the sub stations, every day the SBA/SSA of sub stations should measured the cell voltage and specific gravity of 8 Nos cells of the Battery and make entries in the Battery set maintenance Register to be opened for the purpose. The SBA/SSA should record the cell voltage and specific gravity of next 8 cells the next day and repeat the procedure every day and keep complete record of such reading so as to identify weak cells for remedial actions. This registers should be checked weekly by the JEn/AEn during inspection of the sub station and quick action be taken wherever necessary for the replacement of weak cells of the battery.
2. For construction and maintenance of over head lines the instructions/directions indicated in the booklet "Construction and Maintenance Practice For Sub Transmission and Distribution Net work In Jodhpur Discom" should be strictly followed. The relevant portion is reproduced hereunder for compliance:-

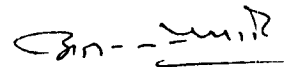
"The important aspect is preventive maintenance as this will minimize the chances of breakdowns. The following steps should be taken:

**Regular inspections** :- The CCA's or the technical staff should patrol the line on regular basis depending on the area and the faults experienced. The patrolling party should collect the following information. They should ensure mentioning of specific location of prominent land mark in their diary so that while doing preventive maintenance the position of faulty section is identified immediately.

- i. Tilted supports, deformed cross arms/clamps spilled/bulged soil around support, missing nuts & bolts.
  - ii. Foreign objects on the conductors, insulators, earth wires etc., excessive sag or tension on the conductors, improper clearance, slipping of clamps and P.G. clamps, damage to the conductor.
  - iii. Damaged insulators or with sparking marks and discs etc.
  - iv. Damaged/missing stays, damaged stay insulators.
  - v. Any other visual change/other defect which may be noticed.
3. All these points should be recorded by the patrol party in details and the Engineer Incharge should decide the priority with which the preventive maintenance is to be undertaken," On inspection/patrolling it is found that line conductor requires replacement or the insulators etc. are in bad shape the same should be noted and a maintenance programme should be chalked out for replacement of damaged portions after taking proper shutdown. In the first instance, old lines of more than 15 years, should be inspected and defects noticed and rectified after taking planned shutdown for preventive maintenance.
4. Inspection of over head lines and the sub stations should be carried out adopting the following procedure:-
- a) All LT lines shall be inspected by the other JEN of the same sub division and a written inspection clearance shall be given by him before commissioning of lines.
  - b) All 11 KV lines and distribution transformers shall be inspected by the other AEN of the same division and a written inspection clearance shall be given by him before commissioning of lines and transformers.
  - c) All 33 KV lines and sub stations shall be inspected by the other XEN of the same circle and a written inspection clearance shall be given by him before commissioning of sub station and erection of lines. Further orders to follow the above procedure shall be issued by the Circle SEs.
  - d) While inspecting the sub stations, the inspection officers shall ensure that 11 KV inter connections, feeder meters, providing of breakers and earthing requirement are completed.
  - e) The usual action for approval of electrical inspector will continue to be taken and required fees etc. Will be deposited
  - f) The usual action for approval of PFCC may also be taken..

5. Earthing Resistance of the sub-station and lines should also be checked once in six months, preferably during the half yearly maintenance schedule. The sub-transmission and distribution lines should be provided with three solid earths per kilometer. The G.I earth wire of each PCC poles on the top should be connected to the cross Arms and in the bottom grounded to earth. The earth wire in the overhead HT/LT lines should be continuous. In case of existing lines, this should be ensured by visual inspection and maintenance and the practice should be strictly followed while erecting new lines.
6. The provisions of guard wires on Railway Crossings, Road crossings and between the two lines should be ensured.
7. CCA/complaint Attending parties when move along the lines to attend the complaints or otherwise should report the unusual phenomenon (like stay removed, loose wires, tilted line supports etc.) and intimate to the concerned JEN for corrective measures. CAA/Compliant Attending Party should not walk just below line conductors while patrolling lines.
8.
  - a) CCA/Complaint Attending Party should not leave the duty pending an emergency complaint or without the replacement or CCA/Party as far as far as practicable.
  - b) Preferably illiterate persons should not be deployed as CCA as far as possible at least one of the persons in the complaint attending party should be literate.
  - c) Complaints should be recorded in the proforma/Register prescribed in the Standard of Performance of the Nigam.
9. Protection equipments should be tested quarterly by the protection wing and short comings should be taken care of on Top Priority. In case, it is observed by the SBA/SSA that a particular breaker assigned to protect a feeder/line failed to operate under unusual conditions and instead the back up protection operated, situation should be immediately reported to the concerned JEN to ensure proper functioning of the protection equipment.
10. While releasing the new connections/load extension earthing and protection devices at the consumer premises as prescribed in the Electricity Rules should be ensured.

All field officers should ensure compliance of aforesaid instructions strictly to avoid electrical accidents.



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