

**Government of India, Ministry of Railways
Research Designs & Standards Organisation, Manak Nagar, Lucknow – 226011**

1. **TITLE:** Guidelines for 'Electrical clearances, speed restrictions and precaution for ODC movement in electrified sections'.
2. **Background:** Vide A & C Slip no. 29, 'Electrical clearances and speed restrictions for ODC movement' given in ACTM Vol. I, Chapter IV, Para 10436 S.N. 3 a, b, c have been revised. This Technical Instruction incorporates revised Electrical clearances, speed restrictions and precautions for movement of ODCs in 25kV ac Electrified sections.

It is prepared based on A&C Slip no 29 & ACTM Vol. I Chapter-IV, Para 10436, 10437, 10438, 10439 & 10440.

3. **INSTRUCTIONS :** Following guideline should be followed for movement of ODC in Electrified Sections:

- 3.1 The following minimum electrical clearances from the lowest point of contact wire to the ODC & speed restrictions, for the passage of ODC through electrified sections should be adopted:
 - a) A Special speed restriction is not required when gross clearance is more than 250 mm.
 - b) Speed must be restricted to 15 Km/h when the clearance is between 250 and 200 mm. (ODCs would not be stopped under critical locations i.e. where clearance is between 250 and 200mm))
 - c) Speed must be restricted to 15 Km/h and overhead power must be switched "off" when the clearance from the contact wire is less than 200 mm.
 - d) No consignment with less than 100 mm gross clearance from the overhead contact wire will be permitted in a 25 kV ac electrified section.
- 3.2 Regarding special precautions to be followed for the movement of ODC over electrified section, the following special precautions prescribed in ACTM Para 10436, 10437,10438, 10439 & 10440 must be ensured.
 - (a) Movement of ODC shall be undertaken only after sanction of competent authority has been obtained.
 - (b) In all cases when an oversize consignment is to be moved, staff accompanying the ODC shall always remember that the overhead equipment is always "live" except when a power block has been obtained from the traction officials. Even when a power block has been obtained, all lines other than those for which the power block has been granted are to be treated as live at 25 kV ac.
 - (c) A representative of the train department should accompany all ODCs having clearances specified in item 1b) and 1c) above, to supervise safe movement of the ODC at locations where clearance from contact wire is critical.
 - (d) A representative of the traction department should also accompany ODC loads having width more than 1981 mm for BG and 1910mm for MG from centre line of track.
 - (e) Section Controller and traction power controller must co-ordinate while an ODC moves in electrified area to ensure that OHE masts are not damaged at locations where the clearance is critical.
 - (f) A list of structures where the clearances are restricted in the electric traction area and also the clearance available under over-bridges should be with the Section Controllers and TPCs.
 - (g) To facilitate checking of clearances available from the OHE for over dimensional consignments, the Operating and Engineering branches at the Divisional and Headquarters level should have with them up to date charts showing the minimum height of contact wire and clearance of OHE masts at various locations in the electrified area. The Operating Department may clear ODCs for movement on the basis of clearances checked with the help of the above-mentioned charts subject to the restrictions mentioned above. However, when sanction of CRS is required to be

obtained for movement of any particular ODC, a specific reference should be made to CEE and a certificate obtained from him in the following form:

"Certified that the minimum height of contact wire on the section over which the consignment is to move is less than except at the following locations where restrictions as indicated below should be observed.

Section	Location	Height of contact or "OFF" wire	Power "ON"	Speed restriction in Km/h
1	2	3	4	5

(h) Power block for movement of ODCs

When an ODC is permitted to be moved in an electrified section only with the OHE power off, it will be the responsibility of the Section Controller to arrange with the TPC for power to be cut off before admitting the ODC in the section. An authorized representative of Traction Distribution Branch will obtain confirmation from TPC by message supported by private number that power has been switched off and then issue a memo to the Guard or other traffic official-in-charge of the train to the effect that power has been switched off over the specified section. Only on receipt of such memo may the train carrying the ODC be allowed to enter the section. Since such a memo is not a "permit to work" earthing of OHE is not necessary.

(i) Movement of Rubber Tyred Vehicles on Railway Wagons.

All metallic parts of rubber tyred vehicles which are transported on railway wagons through 25 KV electrified areas, shall be earthed to avoid the effect of induction.

(j) Hoarding Boards.

Hoarding boards provided in the vicinity of electrified tracks should be located at a safe distance from the track so that the event of their supporting structures being damaged during agitation or storms it should not fall on the OHE or infringe the track. For this purpose, CCS and CPRO will ensure that while granting approval for erection of hoardings boards, it must be ensured that not only these are located at the safe distance from the track but also their structural arrangements are properly secured.

(k) COMPETENCY CERTIFICATE

Competency Certificate and Courses for Assistant Station Masters/Guards of EMUs:

All staff who are required to work in electrified territory must have undergone a course in Electric traction so that they are made familiar with the working rules in the electrified sections. ASMs are also sometimes required to operate isolators at the station premises for which necessary training is to be imparted. Similarly, the guards of the EMUs are also required to undergo an operational course for the working of EMUs and are to undergo a refresher course at regular intervals of 6 months at Electrical Training Schools. Operating department will ensure that only that staffs who have undergone the course in Electric traction are posted in electrified areas.

3.0 **REFERENCE:** RB letter No. 2013/RE/161/22 (3226774) dated 25.10.2018 for issue of A&C slip no. 29 to ACTM.
