



भारत सरकार
नागर विमानन मंत्रालय
(रेल संरक्षा आयोग)

GOVERNMENT OF INDIA
MINISTRY OF CIVIL AVIATION
(COMMISSION OF RAILWAY SAFETY)



रेल संरक्षा आयुक्त
(पश्चिम परिमंडल)

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एम. के. रोड, मुंबई - 400 020
टेली. फैक्स : 022 - 22034351

Commissioner of Railway Safety
(Western Circle)

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No. 16-5/555/ 45

Date: 11.01.2020

**INTRODUCTION OF 25 KV AC ELECTRIC TRACTION IN
MAHESANA (EXCL.)- VIRAMGAM (EXCL.) SECTION OF AHMEDABAD DIVISION OF
WESTERN RAILWAY FOR PUBLIC CARRIAGE OF PASSENGERS &
OPERATION OF FREIGHT SERVICES.**

GAUGE: 1676 MM

LENGTH: RKM- 66.81
TKM- 78.39

AUTHORISATION

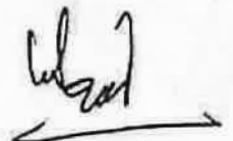
- 1.0 In response to the reference made by the General Manager, Western Railway vide letter No. EL/92/53/2 dated 24.12.2019 for inspection and sanction for opening of the subject work, I have inspected the newly constructed 25 KV electrification works done in Mahesana (Excl.)- Viramgam (Excl.) Single Line section [from Km. 717/19, Ch. 838.00 to Km. 63/15, Ch. 564.00] of Ahmedabad Division of Western Railway on 06th January, 2020. Dy.CRS/S&T/WC/Mumbai & Dy.CEE/TRD/WR assisted me in the inspection. In addition CAO/CORE, PCEE/WR, CEDE/WR, CSE/WR, CE(Works)/WR, DRM/ADI, CPD/RE/ADI and other officers of Ahmedabad Division/ RE accompanied during the inspection.
- 2.0 Inspection was done by Spl train/ on foot/Tower wagon followed by Engine trial/Current collection test conducted in section using Oliver-G. Electric Engine trial from Mahesana to Viramgam by electric locomotive No. WAP7-30758 was conducted with speed upto 110 Kmph.
- 3.0 Based on the inspection, Current collection/Engine trial test report and perusal of the certificates and other documents submitted by GM/WR and RE organization, I am of the opinion that provisions of Section 22(1) of Railway Act, 1989 have generally been complied with and hence under the powers delegated to me vide section 28 of Indian Railway Act and Rule 22(1) of the "Railway's Opening for Public Carriage of Passenger Rules, 2000" as amended vide Notification No.GSR 625(E) dated 21.07.2000, Notification No.GSR 762(E) dated 08.10.2001, Notification No. GSR 44(E) dated 27.01.2005 and Notification No. GSR 76(E) dated 16.02.2005, I hereby accord sanction and authorize for introduction of commercial services in the subject section with 25 KV AC Electric traction at 80 kmph speed (due to 48 heavy sparks observed in trial and incomplete Switching posts) or the speed proposed in zonal railways' Joint Safety certificate whichever is less and with

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Speed restriction as per this office Condonation letter no 221/122 dtd 15.7.19 due to restricted clearance of OHE till raising work of FOB is completed.

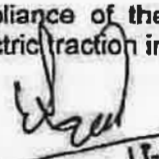
- 4.0 During Current collection test, 48 heavy sparks on OHE were observed. Dy.CEE/RE & Sr.DEE/TRD shall jointly check & confirm the satisfactory attention of all spark locations and its reconfirmation by loco trial before commissioning.
- 5.0 This authorization is subject to the compliance of the following conditions / stipulations by Railway/RE:
- (i) SCADA works shall be completed within 3 months time, failing which CRS sanction will require to be taken again.
 - (ii) CRS sanction shall be separately taken for Line no 2 at Katosan , TSS at Katosan Road and SSP at Jaksi since they were not offered for inspection. These will not be charged without CRS sanction.
 - (iii) One Goods train only will be permitted on electric traction till regular TSS at Katosan Road becomes available due to voltage drop/loading constraints of proposed TSS.
 - (iv) Sr.DSTE & Sr.DEE/TRD shall jointly check & confirm the satisfactory completion of S&T and TRD works in all respect by RE before commissioning.
 - (v) Left over SED and Tower wagon joint checking shall be completed in 7 days time and confirmed to Commission by CPD/RE/ADI.
 - (vi) Platform on pier shall be constructed at bridge mast location on Bridge- 27 for ease of maintenance staff.
 - (vii) Quality of foundation works need to be assured by RE. It was noted that Cube testing was not being witnessed by RE supervisor.
 - (viii) Insulating paint(5 layers) shall be provided at ROB (at Km. 4/906) under all six girders.
 - (ix) It was observed that fire alarm system was not provided in the Relay room at Jaksi station. It shall be planned by division immediately being safety requirement.
 - (x) ATDs at some locations need adjustment.
 - (xi) The OHE mast foundations were found exposed/ of poor quality at Km. 61/13 to 61/21, 58/8, 45/11, 2/10 to 2/4 etc. Stone pitching shall done at these locations.
 - (xii) Quality of Galvanisation was checked at Km. 58/8 by Alco meter & found having non uniform readings of thickness .
 - (xiii) Guy rods were found not sharing anchoring load at number of locations, such as at Km. 54/13, 52/7, 51/15, etc.
 - (xiv) C- jumpers were found deficient in most of the section such as at Km. 53/11, 51/08, 47/13, 41/6, etc. Out-of-run droppers were also not provided at many locations.
 - (xv) Junction Box at Km. 54/11A was found affected with Ants and need treatment being safety equipment.
 - (xvi) Potential equalizing jumpers were not provided at Km. 44/12 & 34/20 (IOL) and at anti-creep wire at Bhankoda station (Line-3).
 - (xvii) Cross bonding & earth pit provision at 100 mtr intervals at stations was incomplete. X-bond between tracks & earth pit shall be provided at one place.
 - (xviii) Anti-falling rod of ATDs was not fitted properly at most of the locations due to non-availability of anchor fittings.
 - (xix) Anti-creep wire was not properly provided at Km. 59/9 & 37/7.
 - (xx) Cross bonds in open route at every 350 mtr intervals were not provided at Km. 55 (all three), 56(3 nos.), 50/5 (01), 48/1, 47/6, 42/7, 48/1-2, 40, 38/03, etc.
 - (xxi) Y- value was not painted on ATD masts at number of locations.
 - (xxii) Restricted OHE clearance boards shall be provided at Km. 44/21. Unwired Turnout board shall be provided at Km. 26/20.
 - (xxiii) Feeder mast at Km. 63/15 was found in tilted condition . It shall be attended.
 - (xxiv) Two extra BM installed at Bhankoda SSP shall be removed and used elsewhere.
 - (xxv) Rail pieces of longer length were found kept from Km. 29/9 to Km. 29/3. They shall be earthed by jumpering.



- (xxvi) TPC phone with call register facilities & with distinctive ringtone shall be provided at all stations.
- (xxvii) LC Gate- 45: Fencing band was found not provided.
- (xxviii) LC Gate- 64:
- Speed breaker was found between the Height gauge & gate boom. All such speed breakers at LC Gates in the section shall be relocated beyond the Height gauge.
 - Road width was noticed as 7 mtr only instead of prescribed minimum 9 mtr. Road widening shall be done.
 - Pedestal earth, earth pit cap & MS patti were found rusted.
 - IPS room opening message was not received by the concerned officer.
 - Gateman hut access steps were rusted/damaged.
- (xxix) Jaksi station:
- Correction in SWRD need to be incorporated early to avoid confusion.
 - AT was not connected for S&T gears.
 - Timer relay (ABB type) was not sealed in Relay Room.
 - IPS spare modules were consumed for block instrument and other circuits.
 - Stray current for DC track circuit was not recorded.
 - OHE bond (structural bond) insulation strip was not provided in track circuited area (noticed at Km. 54/03).
- (xxx) LC-58: Sliding boom was provided inside the ELB (Gate Hut side). Height from road level was found as 110 cm.
- (xxxi) Quality of materials used shall be certified by CEDE for electrical items (Galvanisation of Mast, Conductors & foundation works).
- (xxxii) Adequate training of Station Masters/ staff shall be ensured by DTI & SSE/RE regarding new Station Working Rules/Isolator operation and assurance for the same be taken. Likewise training of Running staff/Crew/staff of other departments should be organized to make them fully conversant with the safety precautions of electrified section.
- (xxxiii) Manning of Switching posts by authorized and trained RE staff round the clock shall be ensured till commissioning of SCADA. TPC/Control CUG numbers shall be provided to them and TPC will maintain their contact numbers.
- (xxxiv) Announcement on stations for public awareness should be made for one month regarding new electrified system at 25000 V.
- (xxxv) Observance of all temporary and permanent speed restrictions in force and/or those that may be imposed from time to time.
- (xxxvi) Observance of all conditions mentioned in Joint Safety Certificate, Track Certificate, Bridge Certificate and OHE Certificate submitted.
- (xxxvii) Diesel locomotives working in the newly electrified section shall have the 'Danger- 25 KV AC OHE above', stenciled on them for warning the staff not to climb on roof top as per Rule No. 17.05(2) of G&SR.
- (xxxviii) The observance of the precautions during Permanent Way maintenance as detailed in Part-J of Chapter II of IRPWM and Para 10420 to 10428 of ACTM Vol-I shall be ensured. Short and long rail jumpers and hand gloves shall be made available to every Key-man and additional pair of gloves shall be provided to the gangs. It shall be ensured that rails stacked do not form a continuous length of 300-meter or more to safeguard against dangers of induced voltages by the OHE.
- (xxxix) Ensuring proper earthing and bonding of track (including water/fuel pipelines at platform), platform fencing, bridges, level crossings, structures, S&T equipment, etc. in the section in accordance with the Code for Bonding and Earthing.
- (xl) It shall be ensured by Railway Administration that SWR and GWR of all stations and LC gates have correctly/completely been amended in English and vernacular language and issued before running of services with electric locomotive in the section.



- (xli) After introduction of services with electric locomotive, current collection test for the entire section shall be re-done at JAG officers' level and necessary corrective action shall be taken thereof.
- (xlii) It must be ensured that there is no infringement to IRSOD.
- (xliii) Sufficient number of staff caution notices, public caution notices, danger boards of approved design and size are provided at the prominent as well as prescribed locations. Caution boards/ Danger boards for staff as well as public should also be provided at all the entrances of platforms/stations.
- (xliv) A list of names of the authorised personnel for opening of isolator duly signed by the Traction Supervisor shall be exhibited prominently in the office of the Station Master (SM) and Train Examiner (TXR) of the station concerned. The keys of isolators shall be inscribed with the distinguishing marks and locked in glass-fronted key box and kept in the custody of the SM on duty. The description of each key shall be painted above each PEG to avoid confusion.
- (xlv) Trilingual shock treatment chart shall be provided at all stations/LC gates. Details of nearest hospitals with contact telephone numbers shall be displayed at all stations.
- (xlvi) All Level Crossing Gates shall be provided with precautions to be taken in electrified section including the steps to be followed in case of the breakdowns. GWR (Gate Working Rules) shall also be modified to include precautions for electrified section.
- (xlvii) All the Gatemen shall be properly trained for safety precautions in electrified section.
- (xlviii) Compliance of the items of core policy guidelines issued vide letter No. CORE/S&T/TENDER/SIG/200/POLICY Pt.VI dated 15.06.2016.
- (xlix) Necessary maintenance infrastructure for traction installations shall be created and availability of trained TRD maintenance staff shall be ensured.
- 6.0 No EMUs or any other rolling stock wider than 3250 mm is permitted to run on this section.
- 7.0 Commercial services should be introduced within 3 months time, failing which CRS sanction will require to be taken again.
- 8.0 Any dilution in the stipulation as detailed above suo-moto by Railway Administration shall automatically invalidate the authorization.
- 9.0 Immediate intimation should be given to the Commission for compliance of the conditions / stipulations of this Authorization prior to introduction of electric traction in the section.


17.01.20

(R.K. Sharma)
Commissioner of Railway Safety
Western Circle, Mumbai

No. 16-5/555/ 45

Date: 13.01.2020

Copy forwarded for information and necessary action to:

1. Chief Commissioner of Railway Safety, Ashok Marg, Lucknow-226 001
2. Secretary (Civil Engineering), Ministry of Railway, Rly.Bd., New Delhi
3. The General Manager, Western Railway, Mumbai
4. The General Manager, CORE, Allahabad
5. PCOM, PCEE, PCSTE, PCSO/WR, DRM/Ahmedabad, CPD/RE/ADI


11.01.20

(R.K. Sharma)
Commissioner of Railway Safety
Western Circle, Mumbai