



सत्यमेव जयते

भारत सरकार

Government of India

विद्युत मंत्रालय

Ministry of Power

केन्द्रीय विद्युत प्राधिकरण

Central Electricity Authority

विद्युत प्रणाली संचार विकास प्रभाग

Power System Communication Development Division

CEA Case No. : MRA-1220		
Induced Voltage (IV) calculation for LILO of 220 kV S/C Transmission Line from MSETCLs Gadchandur S/s to Murli Industries Limited Naranda S/s [Length – 11.07 km] – Regd.		
S. No	Reference No.	Dated
(i)	MSETCL: MSETCL/CO/PS/PTCC/In/B-597/No03446	22.05.2023
(ii)	BSNL: IC/MBI/PTCC/MRA-2587/03	08.09.2023
(iii)	South Central Railway: SG.85/4/3/PTCC/SCR/2023-24/MH-7 RTD (Received via MSETCL e-Mail dated 23.01.2024)	19.12.2023
(iv)	Defense: B/46937/Sigs7(b)/3389	05.09.2023

The PTCC proposal submitted vide reference (i) has been examined. The LF induction on Block and Telecom circuits of South Central Railway with respect to details furnished vide above reference (iii) been computed. The voltage likely to be induced on paralleling Block and Telecom circuits of South Central Railway under Single Line to Ground fault condition are enclosed at Annexure-I. The screening factors as applicable have been considered. DET (WZ), BSNL vide reference (ii) and DG Signals, MoD vide reference (iv) have issued No Objection Certificate (NOC) for charging of the line.

EPR zone for 220 kV proposed S/S is mentioned below :

Name of the proposed Substation	Half diagonal distance, D/2 (mts)	Fault Current I (KA)	Resistance of Earth Mat, R (ohms)	d (mts) at 430 V	d (mts) at 650 V	d (mts) at 7kV	d (mts) at 10kV
220 kV MIL Naranda S/s	44	35	0.32	1102	714	26	5

As per the Telecom Details submitted by BSNL vide above reference (ii), no telephone exchange of BSNL is falling within the EPR zone of proposed 220 kV Substation.

In view of the above, it is requested that PTCC route approval may be issued for the subject transmission line under intimation to this office.

Encl. : As above

Chief Engineer

To,

1.	Divisional Engineer (PTCC), Western Zone	QA & Inspection circle, 1 st floor, D- wing, BSNL Admin Bldg., Junu Tara Road, Santacruz (West), Mumbai-400054	
2.	GM (S&T)	O/o Pr. Chief S&T Engineer South Central Railway Secunderabad	
3.	Chief Engineer (Proj. Scheme Dept.) MSETCL	O/o Chief Engineer MSETCL, Mumbai	Copy for information .

ANNEXURE-I

CEA Case No . : MRA-1220 Name of the Power line : LILO of 220 kV S/C Transmission Line from MSETCLs Gadchandur S/s to Murli Industries Limited Naranda S/s		Map Scale : 1 cm= 500 m Total Length: 11.07 km S.R. Value : 5000 Ohm-cm			
S.No	Telecom . Details	Length of Parallelism in Km .	Mutual Coupling in Ohms .	Effective Fault current in Amps .	I.V in Volts .
South Central Railway Letter No : SG.85/4/3/PTCC/SCR/2023-24/MH-7 RTD Dated 19.12.2023					
<u>Affected Blocks & Telecom Circuits Details</u>					
1	Gadchandur R/s to Maratha Cement Works R/s	Out of Parallelism			