



भारत सरकार

Government of India

विद्युत मंत्रालय

Ministry of Power

केन्द्रीय विद्युत प्राधिकरण

Central Electricity Authority

पावर कम्युनिकेशन डवलपमेंट प्रभाग

Power Communication Development Division

No./CEA/PCD/PTCC/TNG-77 /374-376

Date : 28.03.2019

The Divisional Engineer Telecom (PTCC),  
QA & Inspection (T&D) circle, BSNL,  
1<sup>st</sup> floor, Raj Bhavan Exchange,  
No.26, Sardar Patel Road,  
Guindy, Chennai-600032

**Subject:** Induced Voltage Calculation in respect of PTCC proposal for 220 kV LILO to proposed 220/33 kV SS of M/s Ramagundam Fertilizer & Chemicals Ltd from 220 kV 2<sup>nd</sup> circuit of RSS Malyalpally (Ramagundam) – Nagaram DC line

**Reference:** i) BSNL letter no. SR-PTCC/STS-2302/10 dated 28.02.2019  
ii) South Central Railway letter no. SG.85/4/3/PTCC/SCRSTS201918 RTD dated 19.03.2019

Sir,

The instant PTCC proposal has been examined. The low frequency induction on telecom cables of BSNL and Block & Telecom circuits of South Central Railway with respect to details furnished vide above references have been computed. The Soil Resistivity (SR) value has been taken as 30,000 Ohm-cm. The voltages likely to be induced on paralleling telecom cables of BSNL and Block & Telecom circuits of South Central Railway under Single Line to Ground fault condition are enclosed at Annex-I & II respectively. The screening factors, as applicable, have been considered.

Telecommunication details from Defense are pending and the power authority has shown urgency for charging the line. In view of this, you are requested to issue provisional PTCC route approval.

**Encl.:** As above

m/c

Yours faithfully,

(Naresh Bhandari) 28/3  
Chief Engineer

Copy to:

1. GM (S&T), Head Quarters Office, Signal & Telecomm Branch, South Central Railway, Rail Nilayam, Secunderabad – 500025 (Annexure-II only)
2. Chief Engineer, Construction, TSTRANSCO, Vidyut Soudha, Hyderabad-500082



## ANNEXURE – I

Case No.: TNG-77

Name of the Power line: 220 kV LILO to proposed 220/33 kV SS of M/s Ramagundam Fertilizer & Chemicals Ltd from 220 kV 2nd circuit of RSS Malyalpally (Ramagundam) – Nagaram DC line

Map Scale : 1cm=500mts  
Total Length : 10.80 Km.  
Soil Resistivity : 30000 ohm-cm

Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.
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BSNL letter no. – SR-PTCC/STS-2302/10 dated 28.02.2019

G	Godavarikhani Exchange				
G1	Exchange to P 28 to DP 2801	IV LESS THAN 430 V			
G2	Exchange to P 41 to DP 4101				
G3	Exchange to P 72 to DP 7201				
G4	Exchange to P 69 to DP 6901				
T	Tilaknagar Exchange				
T1	Exchange to P 32 to DP 3201	OUT OF PARALLELISM			
T2	Exchange to P 21 to DP 2101				
T3	Exchange to P 62 to DP 6201				
T4	Exchange to P 54 to DP 5401				
J	Jyothinagar Exchange				
J1	Exchange to P 23 to DP 2301	IV LESS THAN 430 V			
J2	Exchange to P 38 to DP 3801 Police hq				
J3	Exchange to P 52 to DP 5201 (NTPC)				
J4	Exchange to P 44 to DP 4401 (D-5)				
J5	Exchange to P 43 to DP 4301 (D-8)				
F	FCI Exchange				
F1	Exchange to P 31 DP 3101	IV LESS THAN 430 V			
F2	Exchange to 21A to DP 21A01				
F3	Exchange to P 22 to DP 2201				
F4	Exchange to P 21 to DP 2101				
B	Basantnagar Exchange				
B1	Exchange to P 26 to DP 2601	OUT OF PARALLELISM			
B2	Exchange to P 22 to DP 2201				
B3	Exchange to P 31 to DP 3101				
B4	Exchange to P 24 to DP 2401				

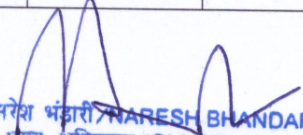
नरेश भंडारी / NARESH BHANDARI  
मुख्य अभियन्ता / Chief Engineer  
केन्द्रीय विद्युत प्राधिकरण / C.E.A.  
विद्युत मंत्रालय / Ministry of Power  
भारत सरकार / Govt. of India  
नई दिल्ली / New Delhi-66



## ANNEXURE – II

<b>Case No.:</b> TNG-77					
<b>Name of the Power line:</b> 220 kV LILO to proposed 220/33 kV SS of M/s Ramagundam Fertilizer & Chemicals Ltd from 220 kV 2nd circuit of RSS Malyalpally (Ramagundam) – Nagaram DC line		<b>Map Scale</b>	: 1cm=500mts		
		<b>Total Length</b>	: 10.80 Km.		
		<b>Soil Resistivity</b>	: 30000 ohm-cm		
	<b>Telecom. Details</b>	<b>Length of Parallelism in Km.</b>	<b>Mutual Coupling in Ohms.</b>	<b>Effective Fault current in Amps.</b>	<b>I.V in Volts.</b>

<b>South Central Railway</b> letter no. – SG.85/4/3/PTCC/SCRTS201918 RTD dated 19.03.2019					
1	Manchiryal (MCI) – Peddampet (PPZ)	OUTSIDE IV CALCULATION CONSIDERATION ZONE			0
2	Peddampet (PPZ) – Ramagundam (RGM)	OUT OF PARALLELISM			0
3	Ramagundam (RGM) – Raghavapuram (RGPM)	1.4	0.0006	10000	6
4	Raghavapuram (RGPM) – Peddapalli (PDPL)	OUT OF PARALLELISM			0

  
 नरेश भंडारी / NARESH BHANDARI  
 मुख्य अभियन्ता / Chief Engineer  
 केन्द्रीय विद्युत प्राधिकरण / C.E.A.  
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