Joint test with Signal supervisors

(Ref: CSTE's office letterNo. SG.73/III dtd 11.04.2007)

Test the cable joints by SSE/Tele, JE/Tele and SSE/Signal, JE/Signal of the concerned section. The team is to verify and attend the following parameters of under ground quad cable [as per RDSO spec] in each block section of the Division.

i) Conductor to earth insulation value of all quads of the cable.[Using 500 V DC megger]

ii) Loop resistance of each pair. [Standard Max loop resistance 56 Ohms/km].

iii) Sequence of pairs as per the color code and terminations. Specific pair only should be used for circuit.

iv) One core from one pair and one core from another should not be used as pair.

v) Pairs should not be paralleled to reduce the line resistance instead voltage feed to be increased.

vi) Proper termination of wires and tightness of terminals [against loose connections etc] with proper eye lets.

vii) Cross talk level measurements as per the recommendations.

viii) Continuity of armour/sheath and earthing of armour /sheath.

Ix) Testing of earth of armour/ sheath at both ends .

x) Availability of cable details in the cable termination box.

xi) Attenuation Test: Instruments to be used:. Transmission measuring set (TMS)

Two TMS sets are required for this measurement.

- One set is kept at one end of the cable and the other at other end.
- Before commencing test the zero errors of the both meters to be checked and corrected.
- Feed 0 db at 800 Hz tone from one end(sending end) and measure the receive level at he other end (receiving end)across 600ohms impedance..
- The transmission loss, return loss, insertion loss are measured using this method.
- The standard values are
  - (a) 4.4 dB/KM at 150KHz (unloaded cable)
  - (b) 2dB /KM at 300-3400HZ (unloaded cable)
  - (C) 0.25 db /km at 800hz (loaded cable)

Xii). Replacement of damaged and low insulation cable.