

**GOVERNMENT OF INDIA  
MINISTRY OF RAILWAYS  
(RAILWAY BOARD)**

No.2022/Sig/33/1/SEM/Misc

New Delhi, dated: 08.11.2023

1. The General Managers/ All Indian Railways.
2. The Director General/ RDSO/ Lucknow.
3. The Director General, NAIR, Vadodara.
4. The Chief Commissioner of Railway Safety, 16A, Ashoka Marg, Lucknow-1
5. The Commissioner of Railway Safety, Western Circle, 2<sup>nd</sup> floor, Churchgate, Station Building Annexe, M.K.Road, Mumbai – 20.
6. The Commissioner of Railway Safety, Central Circle, 2<sup>nd</sup> floor, Churchgate, Station Building Annexe, M.K.Road, Mumbai – 20.
7. The Commissioner of Railway Safety, Eastern Circle, 12<sup>th</sup> floor, 14 Strand Road, Kolkata.
8. The Commissioner of Railway Safety, South Eastern Circle, 12<sup>th</sup> Floor, 14 Strand Road, Kolkata.
09. The Commissioner of Railway Safety (Metro Railway), C/o CRS/Eastern Circle, 12<sup>th</sup> Floor, 14 Strand Road, Kolkata.
10. The Commissioner of Railway Safety, Southern Circle, 7 Seshadri Road, Gandhinagar PO, Bangalore -9.
11. The Commissioner of Railway Safety, South Central Circle, Sarojini Devi Road, Secunderabad – 71.
12. The Commissioner of Railway Safety, North Eastern circle, NE Railway Compound, Hazratganj, Lucknow – 1.
13. The Commissioner of Railway Safety, Northeast Frontier Circle, 12<sup>th</sup> Floor, 14 Strand Road, Kolkata.
14. The Commissioner of Railway Safety, Northern Circle, Safdarjung Railway Station Building, Chanakyapuri, new Delhi – 21.
15. ADAI (Railways), New Delhi (with 15 spare copies for Chief Auditor).
16. As per list 'A' attached.

**SUB: INDIAN RAILWAY SIGNAL ENGINEERING MANUAL**

**(JULY 2021 EDITION)**


**ADDENDUM AND CORRIGENDUM SLIP NO. 3.**

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A copy of Addendum and Corrigendum Slip No.3 of the Indian Railway Signal Engineering Manual (July 2021 Edition) is sent herewith for necessary action.

Case No. 2022/Sig/33/1/SEM/Misc

DA: Corrigendum Slip No. 3.

  
08.11.2023  
**(Shyam Verma)**  
Executive Director /Signal Dev.  
Railway Board

New Delhi, dated: 08.11.2023

Copy to:

PSOs/Sr. PPSs/PPSs/PSs to CRB & CEO, MF, MI, MTRS, MOB&D, DG/HR, DG/RHS, DG/RPF, DG/Safety, Railway Board.

Sr.PPS/PPS to Secretary, Railway Board

Sr.PPSs/PPSs/PSs to AM(Budget), AM(CE), AM(M & BD), AM(Traction), AM(Fin.), AM(ME), AM(Plg), AM(Signal), AM(T&C), AM(Traffic), AM(Works), AM(Telecom), AM(Revenue), AM(RE), AM(L&A), AM(Comml.), AM(PU), AM(RS),

Sr.PPSs/PPSs/PSs to PED/Account, PED/CE(P), PED/Infra, PED/EERS, PED/Safety, PED/GS, PED/EE(Dev.), PED/TTM, PED/IR, PED(Bridge), PED(Chg.), PED/Vig., PED/W& Dev., PED/Staff, PED/HR, PED/SM, PED/S&T(Dev.)

## LIST 'A'

1. PCSTE's, All Indian Railways.

2. ED(Co-ord.)/Signal, RDSO Lucknow.

3. The Director Generals

- IRICEN, Pune
- IRIEEN, Nasik
- IRISSET, Secunderabad
- IRIMEE, Jamalpur
- IRITM, Lucknow

4. The Chairman & Managing Directors/

Managing Directors

- Konkan Railway Corporation Ltd. New Delhi
- IRCON International Ltd, New Delhi
- RITES Ltd., Gurugram
- RVNL, New Delhi
- DFCCIL, New Delhi
- DMRC, New Delhi
- MRVC Ltd., Mumbai
- RLDA, New Delhi
- IRFC, New Delhi
- RCIL, Gurugram
- High Speed Rail Corridor

**INDIAN RAILWAY SIGNAL ENGINEERING MANUAL**  
**(JULY 2021 EDITION)**

**Addendum and Corrigendum Slip No. 3**

Replaced existing Chapter 2 : Duties of Signal and Telecommunication Engineers (Pages no. 7 to 12) with revised Chapter 2 : Duties of Signal and Telecommunication Engineers (15 pages) as attached.

DA: As Above

Case No. 2022/Sig/33/1/SEM/Misc  
New Delhi, dated 08.11.2023

  
08.11.2023  
(Shyam Verma)  
Executive Director/Signal Development  
Railway Board

## **Chapter 2: Duties of Signal and Telecommunication Engineers**

### **Section 1: Duties of Signal and Telecommunication Engineers in Charge of Maintenance or Construction**

#### **2.1.1 Duties of Signal and Telecommunication Engineer in charge of Maintenance or Construction**

The Sr.DSTE/ Dy.CSTE(C)/ Incharge of Maintenance or Construction is generally responsible for:

- (a) The installation and maintenance of all Signalling and Telecommunication equipments under his charge in a satisfactory and safe condition.
- (b) Observance of the rules and procedure laid down in the General and Subsidiary Rules, for opening of a Railway, the Signal Engineering Manual, the Telecommunication Manual, relevant Rule books and Manual and Orders and Circulars issued by Railway Board, Guidelines issued by RDSO and Circulars issued by the Principal Chief Signal and Telecommunication Engineer from time-to-time and ensuring that all staff under his charge are acquainted with relevant Rules and working methods and efficiently perform their allotted duties.
- (c) Preparation of plans, drawings, diagrams, estimates and tender schedules and safe execution of works as per prescribed norms.
- (d) Ensuring that all inspection notes of higher authorities receive prompt action and submit compliance report.
- (e) Co-ordination with Engineering, other branches and other organisations like, PSUs etc. in case of combined works; obtaining sanction of Commissioner of Railway Safety/General Manager/PCSTE for new signalling works or alterations and additions to the existing signalling installations, either separately for purely signalling works or jointly with other departmental officers in the case of combined works.
- (f) Obtaining all necessary approvals/sanctions from RDSO/any other competent authority as per requirement.
- (g) Co-ordination with concerned departments in case of accidents for speedy restoration of traffic and for investigation into the causes of accidents.
- (h) Co-ordination with officers and staff of other departments in all other matters to ensure smooth functioning of Signalling and Telecommunication system.

- (i) Preparation of Tender schedules for works, Annual Repair Contracts (ARC), Annual Maintenance Contracts (AMC) of equipments, management of contracts, Timely payments to the contractor, Timely renewals of ARC/AMC, ensuring that contractual agencies deploy qualified man power & quality of works.
- (j) Ensuring supply of approved quality materials and tools for the installation and maintenance of the equipment.
- (k) Control over expenditure in relation to budget allotments and sanctioned estimates.
- (l) Submission of proposals for Revenue and Works Budget and for periodic reviews.
- (m) Exercise of such powers as may be delegated to him/her in Establishment and other matters.
- (n) Ensuring strict discipline amongst his/her staff within the frame work of the Rules.
- (o) Dealing promptly with appeals and representations from and looking after the welfare of staff.
- (p) Issue of special and specific maintenance schedules for SSE(Signal)/Incharge, Sectional SSE/JE (Signal) and Technicians as and when necessary.

### **2.1.2 Transfer of Charge**

- (a) Instructions on "Transfer of Charge" are contained in Chapter I of Indian Railway Code for Engineering Department.
- (b) Senior Divisional Signal and Telecommunication Engineer/Dy. Chief Signal and Telecommunication Engineers handing over and taking over charge of a Division or of a work shall carry out joint inspection of such works or important sections as necessary.
- (c) The "Transfer of Charge" statement shall be prepared in adequate number of copies, signed by both and one copy sent to the Principal Chief Signal and Telecommunication Engineer.

### **2.1.3 Applicability to other Signal and Telecommunication Engineers:**

These instructions with suitable modifications will apply to the other Signal and Telecommunication Engineers such as DSTE/ASTE posted to a Division or extra Divisional units for executions of works.

## **Section 2: Additional Duties of Signal and Telecommunication Engineer in charge of Maintenance**

### **2.2.1 Sr DSTE is generally responsible for:**

(a) Ensuring that no alteration to an installation is made, which is a deviation from the original approved plan diagram or specification, without the authority of the Principal Chief Signal and Telecommunication Engineer.

(b) Sr.DSTE shall inspect minimum 20% of Installations or any other percentage/number of installations (including Footplate) in his Jurisdiction as decided by PCSTE of Zonal Railway once in a year and every section must be covered. He shall also ensure stipulated inspections by a monthly report of inspections so made shall be submitted to the Headquarters Office.

**Note:** Sectional Sr.DSTEs shall do footplate inspection of all the sections of his jurisdiction once in a year.

(c) Ensuring of Footplate inspection by a locomotive or a driving cab both by day and by night in both Up and Down direction once in half year, at ASTE/DSTE level within their respective sections preferably jointly with officers of Mechanical/ Electrical/ Operating/ Engineering Departments.

(d) Having in his possession the under mentioned drawings and registers as required when called upon to accompany the inspection of superior officers like Divisional Railway Manager, Principal Chief Signal and Telecommunication Engineer, General Manager, Commissioner of Railway Safety or an officer of the Railway Board etc.

(i) Interlocking plans of the section;

(ii) Foot plate/station inspection details;

(iii) Previous inspection reports of the section by DRM/Principal Chief Signal and Telecommunication Engineer, General Manager, Commissioner of Railway Safety, Railway Board officers and their compliances.

(iv) Any other books/papers/documents as per instructions issued by the Headquarters office of the Zonal Railway.

(e) Inspection of offices and stores of SSE (Signal) Stores /Incharge covering at least 25% stores & offices in a year. During the inspection, sample check of some of store items, shall be made. Suitable measures for proper storage of Materials shall be ensured to avoid Deterioration/ Damage/ Pilferage/ Fire accidents.

(f) Ensure inspection of Signal and Telecommunication installations and foot plate inspections by the DSTE/ASTE/SSE/JE (Signals) under his/her control.

(g) Analysing the Signalling incidences/Data logger exceptional reports, gear redundancy monitoring through datalogger, failures from the reports submitted by the Sectional SSE/JE (Signal) and taking remedial measures to eliminate recurrence of failures. The reports shall be examined in a meeting jointly with all SSE (Signal)/Incharge of the division once in 3 months to improve the standard of maintenance. He shall ensure Timely renewal of AMC/Service Contracts, where applicable.

*Note: Each Sr.Divisional Signal and Telecommunication Engineer must maintain a record showing the number of failures and number of trains detained every month over the jurisdiction of each DSTE/ADSTE/JE/SSE.*

(h) Drawing out a programme of System Integrity Test of PI/RR/EI installations, overhauling and/or testing of interlocking frames, interlocking key boxes, Station Master's slide control frames, block instruments, relays, cables, point and signal machines, etc. as per instructions contained in Para No. 19.8.8.

(i) Reviewing the position with regard to supply of stores on the Division periodically.

(j) Planning replacements of worn out installations, as per codal life or on condition basis and additional signalling inputs necessary to improve the working and submission of proposals for the same.

(k) (i) Reviewing the staff position periodically and plan the staff strength including requirements of Rest Giver, Leave Reserve, Training Reserve and Night failure rectification gangs is neither in excess nor short.

(ii) Redeploy staff or process for additional maintenance staff (where required) before new works or additions/alterations to existing installations involving increased workload are commissioned.

(l) Ensure that staff adopt safe working practices & arrange for Periodical Technical briefings and safety Seminars to update them of Latest Procedures/Circulars. Ensure that all stations have been provided with approved drawings, ensure maintenance of Registers.

(m) Ensuring sending periodical returns to Head quarters office as well as replies to letters from Headquarter office.

(n) Ensuring provision of tool kit and protection kit to maintenance staff.

(o) Sr.DSTE shall arrange for training of all Probationers /Supervisors deputed for training according to the specified programme. He will also ensure necessary training of Officers & Staff in Division.

**2.2.2** The stipulations in Section '2' will also apply to a Dy. Chief Signal and Telecommunication Engineer (Construction/Project/Works), who is entrusted with the maintenance of any installation as for the time being.

**2.2.3 DSTE/ADSTE is generally responsible for:**

**2.2.3.1(a)** Observance of the rules and procedures and knowledge of Rules and Regulations as laid down in:

- (1) The Indian Railways Act;
- (2) Indian Railways (Open Lines) General Rules and Subsidiary Rules;
- (3) Indian Railways Schedule of Dimensions 1676 mm Gauge (BG);
- (4) Rules for Opening of Railways for Public carriage of Passengers
- (5) Indian Railways Signal Engineering Manual
- (6) Indian Railways Telecommunication Manual
- (7) Indian Railways Permanent Way Manual;
- (8) Block Manual of Zone
- (9) Operating Manual of the Zone
- (10) Manual for Glued Insulated Rail Joints;
- (11) Indian Railways Accident Manual;
- (12) AC Traction Manual (ACTM)
- (13) Other departmental codes & Manuals;
- (14) Latest correction slips, Instruction, and circulars issued from time to time, relating to aforesaid;

He shall have up-to-date copies of these codes and manuals with all correction slips etc. He shall ensure that all the staff under him are acquainted with the relevant rules and working methods connected with their duties.

(b) DSTE/ADSTE shall be responsible for functions as detailed in Para 2.1.1 & 2.1.2 of IRSEM pertaining to his jurisdiction.

(c) Co-ordination with concerned departments in case of accidents for speedy restoration of traffic and for investigation into the causes of accidents.

(d) Ensuring that no alteration to an installation is made, which is a deviation from the original approved plan diagram or specification, without the authority of the Principal Chief Signal and Telecommunication Engineer.

- (e) Inspection of all Signalling installations within his jurisdiction in a span of one year and footplate of a locomotive or a driving cab both by day and by night in both Up and Down direction once in every half year, preferably jointly with officers of Mechanical / Electrical / Operating / Engineering Departments.
- (f) Having in his possession the under mentioned drawings and registers (hard copy or Soft copy) as required when called upon to accompany the inspection of superior officers like Sr DSTE, Divisional Railway Manager, Principal Chief Signal and Telecommunication Engineer, General Manager, Commissioner of Railway Safety, and Railway Board Officers.
  - i. Interlocking plans of the section;
  - ii. Foot plate/station inspection details;
  - iii. Previous inspection reports of the section by Divisional Officers/HODs/PCSTE/ General Manager/ Commissioner of Railway Safety/ Railway Board officers and their compliances.
  - iv. Any other books/ papers / documents as per instructions issued by the Headquarters of the Zonal Railway or Divisional office.
- (g) Inspection of office and stores of SSE (Signal) Stores/Incharge once in a year. During the inspection sample check of some of the store items shall be made. Suitable measures for proper storage of Materials shall be ensured to avoid Deterioration/Damage/Pilferage/Fire accidents. When checking stores, particular attention should be paid to the availability and proper distribution of imprest materials, distribution of tools and measuring instruments, Materials lying unused for longer durations, disposal/distribution of materials not required because of changes in systems, protection equipment and other important items in stores, disposal of scrap items and upkeep of records in office.
- (h) Ensure inspection of Signal and Telecommunication installations and foot plate inspections by the SSE/JE (Signals) under his/her control.
- (i) DSTE/ADSTE shall issue the inspection notes after each inspection at the earliest and ensure compliance of the instructions within a reasonable period in the field.
- (j) He shall ensure prompt attention to any signal incidences in his jurisdiction. Analysing the Signalling incidences/Data logger exceptional reports, gear redundancy monitoring through datalogger, failures from the reports submitted by the Sectional SSE/JE (Signal) and taking remedial measures to eliminate recurrence of failures.
- (k) He shall ensure implementation of System Integrity Test as per schedule.

- (l) Reviewing the position with regard to supply of stores in his jurisdiction periodically.
- (m) Planning replacements of various equipments of installations, as per codal life or on condition basis and additional signalling inputs necessary to improve the working and submission of proposals for the same.
- (n) (i) Reviewing the staff position periodically including requirements of Rest Giver, Leave Reserve, Training Reserve and Night failure rectification gangs etc. and advising the Divisional Office.
- (ii) Redeploy staff or assist for process for additional maintenance staff (where required) before new works or additions/alterations to existing installations involving increased workload are commissioned with in his jurisdiction.
- (o) Ensure that staff adopt safe working practices & arrange for Periodical Technical briefings and safety seminars to update them of Latest Procedures/Circulars. Ensure that all stations have been provided with approved/as built latest drawings and all required maintenance registers are available and kept updated.
- (p) Ensuring sending periodical returns to Divisional Office as well as replies to letters from Division within the time specified.
- (q) Ensuring provision of tool kit and protection kit to maintenance staff.
- (r) DSTE/ ADSTE shall impart training of all Supervisors deputed for training according to the specified programme. He shall monitor necessary training of staff in his jurisdiction and advise Divisional Office.
- (s) Planning for disconnection/blocks for System Integrity Test, maintenance of equipments, joint works and submitting to Divisional Office.
- (t) Co-ordination with officers and staff of other departments to ensure smooth functioning of Signalling and Telecommunication system.
- (u) Coordination with Construction / Project/ PSU's to ensure quality of work and smooth execution.

### **Section 3: Additional Duties of Dy CSTE/ DSTE/ ASTE Incharge of Construction/Project/Works units**

#### **2.3.1 Dy. CSTE Incharge is responsible for**

- (a) The accuracy, quality and progress of the works entrusted to him and for ensuring that "each work is efficiently organised and so programmed that it progresses speedily and is completed within the time specified". If a work is to be executed through a contractual agency, he shall define Tender Schedules accurately as per actual requirements at site, without any ambiguity, incorporate Special conditions where ever required, and ensure quality execution confirming to laid down Quality standards.
- (b) Ensuring that all works are carried out strictly in accordance with the approved plans and drawings, specifications and conforming to the provisions of Manuals. Deviations, if any, shall have the prior approval of the PCSTE.
- (c) (i) Ensuring that traffic notices & Programme of Pre-NI and NI are issued in consultation with other Divisional officers before any existing installation is altered or any new installation is introduced which affects the safe working of any Signal, points or interlocking:  
  
(ii) Ensuring issue of temporary working instructions/Rules for working of traffic/Green Notice, where necessary.
- (d) Furnishing relevant information to the operating department to help them in the preparation of working rules and temporary working instructions.
- (e) Arranging for obtaining the sanction of Commissioner of Railway Safety/General Manager/PCSTE where required as per instructions in Chapter 9 of SEM.
- (f) Advising Commissioner of Railway Safety, General Manager and PCSTE by a message after bringing a new installation or modification to the existing installation into use and submission of a Safety Certificate as per instructions in Para No. 9.2.5.
- (g) Submitting progress reports as per Annexure: 2-A1 to Headquarters every month.
- (h) Periodical verification of the materials at site as per Para No. 6.8.2.

### **2.3.2 DSTE/ASTE in Construction/Project/Works units will be responsible for:**

- (a) Ensuring execution of S&T works as per approved SIP, Table of Control, Circuits/Logic and other relevant directives & Technical Advisory Notes (TAN).
- (b) He/She shall plan works in detail including various interfaces and monitor the progress of work.
- (c) He/She will be responsible for checking the schedule prepared by JE/SSE and do site survey as necessary.
- (d) He/She will be responsible for arranging site specific data for drawing & design office and Dy.CSTE.
- (e) He/She will be responsible for ensuring quality checks of the works during execution as prescribed. He will assist Dy.CSTE for variation, NS items, revision of estimates for the work assigned.
- (f) Ensuring that all works are carried out strictly in accordance with the approved plans and drawings, specifications and conforming to the provisions of Manuals and Contract. Any deviation should be reported to Dy.CSTE incharge.
- (g) He/She will be responsible for checking of SWR, SWRD, CRS and General Manager / PCSTE sanction documents for S&T work.
- (h) He/She will be responsible for arranging and conducting FAT, SAT as per CRC Checksum of approved drawing/diagram. He will ensure testing of all the gears during commissioning.
- (i) He/She will be responsible for signing of works opening message and safety certificate
- (j) He/She will be responsible for checking the material statement, final bill and closure of the contract in his jurisdiction.
- (k) He/She will be responsible for coordination with other departments for joint inspection with open line Engineering, TRD, Electrical General, Signal & Telecom and any other agency for the assigned project.
- (l) He/She will check the completion of drawings as per Railways practice and will ensure to handover all the as built documents to open line after commissioning.

*Note: (i) The rules in Section '3' will apply to Sr.DSTE/DSTE/ADSTE normally in charge of maintenance, who is entrusted with the execution of certain works.*

*(ii) Where ever "His/he" is mentioned in this chapter, it also applies to "Her/She"*

**Note - This Chapter has under mentioned Annexure**

<b>S No.</b>	<b>Annexure no.</b>	<b>Description</b>
1	2-A1	Engineer's Progress Report
2	2-A2	Inspection Schedule of JAG Officers incharge of Maintenance
3	2-A3	Inspection Schedule of JS/SS Officers incharge of Maintenance
4	2-A4	Guidelines for Inspections

Para No. 2.3.1(f)

Annexure: 2-A1

Form No.S&amp;T.PR/2.1

**Engineer's Progress Report****SIGNAL & TELECOMMUNICATION DEPARTMENT**

..... RAILWAY

..... Division/District

Monthly Progress Report for the month ending..... 20

S. No.	Name of work & IRPSM Id	Cost and Allocation	Estimate No. and date of sanction quoting authority	Date funds allotted quoting authority	Reference to commissioner Railway Safety/General Manager/ PCSTE Sanction	Percentage of material received up to end of the month	Name of Contractor & Date work started	Percentage of work done during the month	Total percentage of work done up to the end of last month	Remarks

Signature .....

Name .....

Designation .....

Mobile No. ....

## Annexure 2-A2

### Inspection Schedule for Sr.DSTE/ Dy.CSTE incharge of Maintenance

Item	Inspection Area	Periodicity
a)	Inspection of all Signalling and Telecommunication installations at Station including Footplate inspections within his jurisdiction. (Para 2.2.1 (b) shall apply)	Minimum 20% of installations (including Footplate) or any other percentage/number of installations in his Jurisdiction as decided by PCSTE of Zonal Railway (including footplate) once in a year, covering every section.
b)	Inspection of all Signalling and Telecommunication installations at Auto huts, Relay Huts, LC Gates, IBH, including Footplate inspections etc. (Para 2.2.1 (b) shall apply)	Minimum 20% of installations (including Footplate) or any other percentage/ number of installations in his Jurisdiction as decided by PCSTE of Zonal Railway (including footplate) once in a year, covering every section.
c)	System Integrity testing of all Signalling installations (Para 19.8.8 shall apply.)	Ensure this is done by DSTE/ADSTE once in 5 years
d)	Inspection of Accident Relief Train (ART) / Accident Relief Medical Van (ARMV) /Self Propelled Accident Relief Train (SPART)	Once in six months

Note: 1) Periodicity mentioned is statutory requirement. Sr.DSTE is free to do more inspections as may be required by Zone/Division.

2) Sectional Sr. DSTE shall do footplate inspection of all the sections and minimum 20% of installations in his jurisdiction once a year covering every section.

### Annexure 2-A3

#### Inspection schedule of ADSTE/ DSTE incharge of Maintenance

Item	Inspection Area	Periodicity
a)	Inspection of all Signalling and Telecommunication installations at Station within his jurisdiction.	ADSTE/DSTE - Once in a year
b)	Inspection of all Signalling and Telecommunication installations at Auto huts, Relay Huts, LC Gates, IBH, etc.	ADSTE/DSTE - Once in a year
c)	Footplate inspection - UP and DN direction during Day and night time	ADSTE/DSTE - Once in six months
d)	System Integrity testing of all Signalling installations in reference to IRSEM 19.8.8.	ADSTE/DSTE - once in five years
e)	Inspection of Accident Relief Train (ART) / Accident Relief Medical Van (ARMV) /Self Propelled Accident Relief Train (SPART)	ADSTE/DSTE - once in three months
f)	Inspection of offices and Stores of SSE/ Signal (Stores/Incharge) and SSE/Telecom (Stores/Incharge)	ADSTE/DSTE - Once in a year

**Note:** 1) Periodicity mentioned is statutory requirement. DSTE/ADSTE are free to do more inspections as may be required by Zone/Division.

2) In addition to above, DSTE/ADSTE must adhere to the schedule of inspection issued by respective Zonal/Divisional offices.

## Annexure 2-A4


### Broad Guidelines for Annual Inspections of ADSTE/ DSTE's

1	<b>General Items/Details for Inspections at stations -</b>	
	(i)	Availability of approved completion /as built verified drawings and documents up to last commissioning/modification as per Annexure 21-A2 of IRSEM.
	(ii)	Latest Checksum/CRC of EI & IR-ATP systems and their matching with safety certificate on last commissioning.
	(iii)	Availability of Pre-commissioning checklists & OEM certificates as applicable (with checksums/CRC as the case may be)
	(iv)	Competency Cum training history book for maintainers.
	(v)	Critical items of Last Annual Inspection report of ASTE/DSTE for Compliance
	(vi)	Up to date Maintenance records, Drawings & Registers / Cards of Signalling gears & Equipments (such as EI, IR-ATP, SSDAC, MSDAC, IPS, Point machines, Data Logger, Level Crossing gates, Block Instruments, Track circuit, Earth Leakage Detector, UFSBI, Color light Signals, Control Panel, Cables, Cables meggering register etc.) as per Annexure 3-A5 of IRSEM.
	(vii)	Availability of required Manuals, Original Equipment Manufacturer documents, Trouble Shooting guidelines of different equipments, Technical and Maintenance Circulars, TAN issued by Zone/Division and Safety Circulars/RDSO etc.
	(viii)	Summer/Monsoon/Winter preparations for S&T gears.
2	<b>Items for Inspection in SM's Control Panel / VDU Room</b>	
	(i)	Alertness & Competency of On duty SM on Panel
	(ii)	Miscellaneous check on knowledge of SM on his response & command of various signaling features through VDU/CCIP/Alarm Panels (including Fire, IPS, IR-ATP (Kavach) )
	(iii)	Procedures followed by SM for reporting & rectification of signaling incidences.
	(iv)	Procedures of Relay room opening, Disconnection/Reconnection register, Counter registers, Crank handle Emergency cross over testing registers etc.
	(v)	Joint inspection register of Point and crossing- whether periodicity is followed, status of compliances of deficiencies.
	(vi)	Status of Joint inspection of traction bonding, electrical assets & petty repairs, S&T complaints regarding relay room leakage, SM Room leakage which affects S&T equipment.
	(vii)	Records of Testing of Signalling as per Para 21.6.1 of IRSEM
	(viii)	Signal Failure Register - whether all entered failures are closed out with proper remarks. Signatures of in-charge and remarks.
	(ix)	Working of VHF sets, MTRC Phones (if provided), Control Phones, Hot lines, Auto Telephones.
3.	<b>Items for inspection in Relay Room, S&amp;T Equipments including Records</b>	
	(i)	Inspect that maintenance schedules and safety checks of various gears is

		being carried out as per prescribed procedure of IRSEM/OEM (Original Equipment Manufacturer) guidelines /Zonal guidelines etc depending on the applicability.
	(ii)	AMC wherever applicable are being done as per schedule and all required parameters are being checked with the records. Sample check may be carried out also.
	(iii)	The working of datalogger, its reports and action being taken.
	(iv)	Test knowledge and skills of S&T staff.
	(v)	Availability of spares and tool kits including uniforms, safety jackets, safety shoes etc.
	(vi)	Inspect outdoor gears like points, track circuits, axle counters, signals and test check their parameters, writing details, safety checks such as obstruction test, TSR etc, including Test Check of various parameters to be carried out to verify maintenance records.
	(vii)	Inspect Relay room with emphasis on <ul style="list-style-type: none"> <li>➤ Generation of proper SMS on opening and closing Doors.</li> <li>➤ Updated writing details &amp; cable termination details in relay room.</li> <li>➤ Latest completion drawings/ as built drawings are available and are in readable condition,</li> <li>➤ Proper lighting is available</li> <li>➤ AC if provided is functional. If no AC is provided, then fans etc are in working condition.</li> <li>➤ Fuses with proper rating.</li> <li>➤ Sample measurement of voltages at busbars</li> <li>➤ No loose wires anywhere,</li> <li>➤ All Relays are sealed properly and Relays are properly locked in base.</li> <li>➤ No Relays shall be overdue for replacement as per codal life</li> <li>➤ Alarms if any on EI, UFSBI, Datalogger</li> <li>➤ Earthing arrangement (Perimeteric for EI ) and proper soldered earth wires, measurement of Earth Resistances</li> <li>➤ Functioning of Fire alarm system</li> <li>➤ All entry/exit of cables are sealed.</li> </ul>
	(viii)	Inspection of Power Supply IPS etc.
	(ix)	Frequent problems of drainage, track circuit reliability due to loading of various minerals, charging of AC-Rakes which adversely affect signalling.
4		<b>Counselling of Station Staff and staff grievances</b>
	4.1	Counselling of Station Staff on following lines- Safety norms to be followed during Signal failures, Block Instrument failure, personal safety with importance of wearing uniforms, understanding of various JPOs, Safety Circulars, Fire safety of S&T installation, Procedures of Relay room opening, disconnection/reconnection/Blocks, cranking of points, emergency point operation, Non Signalled movement and Movement on Calling On, etc.
	4.2	Grievances of staff to be noted for redressal.

Note: The officer shall prepare inspection reports following the above as guidance. Any other items beyond this may be inspected by the officer.

Case no.2022/Sig/33/1/SEM/Misc , New Delhi dated 08.11.2023

  
ED/Sig.Dev.IRy.Bd.  
08.11.23

