RBE No. ..03/2024....

भारत सरकार Government of India
रेल मंत्रालय Ministry of Railways
(रेलवे बोर्ड) (Railway Board)

No. E (MPP)/2019/03/46 **New Delhi, dated: 09.01.2024**

The General Manager,
All Zonal Railways/PUs
Metro Railway, Kolkata
CORE, Allahabad
DG/RDSO/Lucknow
CAO/DMW/ Patiala
CAO/COFMOW/New Delhi
ED/CAMTECH/Gwalior
DG/NAIR/Vadodara
DG/IRITM/Lucknow
DG/IRIEEN/Nasik
DG/IRICEN/Pune
DG/IRISET/Secunderabad
DG/IRIMEE/Jamalpur
DG/ IRIFM/ Secunderabad
DG/ JRRPF/ Lucknow

Sub: Revised Training Modules of Non- Gazetted Staff of Civil Engineering Department.

Vide Board's letter no. E (MPP) 2019/03/46 dt. 24.12.2021 (RBE no. 94/2021), revised training module of non- gazetted staff of civil engineering department was circulated to all Zonal Railways/ PUs and uploaded on railnet under heading **MPP Training Circulars**.

2. IRICEN has now submitted the revised training module for Induction & Refresher training course of Track Maintainers, which has been reviewed in Board's office and the same has been approved by Board (Member/Infrastructure).

3. Accordingly, the revised training modules for Induction & Refresher training of Track Maintainers, have been scanned and uploaded under **MPP Training Circulars** and can be viewed or downloaded from **Railnet/Indian Railways website.**

4. This disposes of NR's letter no.1-WO/Training of Non-Gazetted P Way Staff dated 05.09.2022

5. Kindly acknowledge receipt.

Encl. : (Revised Training Modules – 05 pages)

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9/1/24

(Amit Singh Mehra)
Director/Man Power Planning

No. E (MPP)/2019/03/46 **New Delhi, dated: 09.01.2024**

Copy to:

1) The General Secretary, NFIR, 3 Chelmsford Road, New Delhi for information (Copy may be downloaded from E(MPP) Training Circulars/Railnet/Internet).

2) The General Secretary, AIRF, 4 State Entry Road, New Delhi for information (Copy may be downloaded from E(MPP) Training Circulars/Railnet/Internet).

3) The Secretary General, FROA, R.No.256-A, Rail Bhavan, New Delhi for information (Copy may be downloaded from E(MPP) Training Circulars/Railnet/Internet).

4) The Secretary General, IRPOF, R.No.268, Rail Bhavan, New Delhi for information (Copy may be downloaded from E(MPP) Training Circulars/Railnet/Internet).

5) All Members, Department Council & Secretary Staff side National Council 13-C, Ferozeshah Road, New Delhi (Copy may be downloaded from E(MPP) Training Circulars/Railnet/Internet).

6) The Secretary General, AIRPF Association, Room No.256-D, Rail Bhavan, New Delhi (Copy may be downloaded from E(MPP) Training Circulars/Railnet/Internet).

7) General Secretary, All India SC & ST Railway Employees Association, 171/B-3, Basant Lane Railway Colony, New Delhi (Copy may be downloaded from E(MPP) Training Circulars/Railnet/Internet).

For Principal Executive Director (IR) /Railway Board

No. E (MPP)/2019/3/46 **New Delhi, dated: 09.01.2024**

Copy to:

i) PS & ED(PG) to MR, MoSR (D) & MoSR (J)

ii) PSO/Sr.PPS to CRB, MF, M(Infra.), M(TRS), M(O&BD), DG(HR), DG(RHS) & DG(RPF)

iii) Sr.PPS/PPS/PS to AM(Budget), AM(CE), AM(C&IS), AM(Comml.), AM(Traction), AM(Fin), AM(Mech.), AM(Plg.), AM(Project), AM(PU), AM(Sig.), AM(Staff), AM(RS), AM(T&C), AM(Tele), AM(TT), AM(Works), PED(Vig.), PED(Safety), PED(Coaching) LA,

iv) ED(Plg.), ED(Accts.), EDCE(B&S), EDCE(G), EDCE(Plg.), ED(CHG), ED(CC), ED(C&IS), ED(E&R), EDEE(Dev), EDEE(G), EDE, ED(RRB), EDE(N), EDE(Res), EDF, EDF(B), EDF(X)I, EDF(X)II, ED(H), JS(C), EDME(Chg.), EDME(Fr.), ED(PC)I, ED(PC)II, EDRE, ED(Safety), ED(Safety)-II, IG./RPF(Hqs), ED(Sig.), ED(SP), EDRS(G), EDRS(S), ED(TD), EDTC(R), EDCE(P), ED(PM), ED(FM), EDPG, EDTT(F), EDTT(S), EDV(E), EDV(Elect), EDV(T), EDVE(S), ED(W).

v) Chief Commissioner of Railway Safety, Lucknow.

vi) E(Trg.), E(NG)I, E(NG)II, E(G), F(E)I, F(E)II, F(E)III, E(SCT)I, E(SCT)II branches of Railway Board.

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Room No. 27A, Ground Floor, Rail Bhawan, New Delhi-110001

TRAINING MODULE FOR INDUCTION COURSE (T-9) (Revised)

CATEGORY: TRACK MAINTAINER DURATION: 30 DAYS (240 PERIODS)

TOPIC	TOPIC DETAILS	Periods	
		Existing	Revised
	PART – I INTRODUCTION	**6**	**6**
1.1	Railway's Organizational Structure, Role of Track-maintainer in Railways.	2	2
1.2	Classification of Routes.	1	1
1.3	Duties & Responsibilities of Track-maintainer (IRPWM Para 149). Duties of Trackman as per para 2.11 of GR.	3	3
	PART – II PERSONAL SAFETY	**21**	**29**
1.1	Precaution during work on running lines, **including Double / Multiple lines, vicinity of LCs, important major yards, shunting / marshalling lines etc.**	1	**2**
1.2	Precaution during routine maintenance activity, handling/ transporting materials **including while working in Block, Speed Restriction etc**	1	**2**
1.3	Precaution during Track machine working **including pre, post and during tamping, BCM working, sharp look out on adjoining lines etc**	2	**4**
1.4	Precaution during working on sharp Curves/Curves with poor visibility. Precaution during working at accident spots, congested locations like bridge, tunnel. in High speed locations, **Use of Rakshak and other such warning systems**	1	**3**
1.5	Precautions in track circuited areas, electrified areas, **including working with Cranes, JCBs, earth moving equipment etc.**	2	**3**
1.6	Precaution while working during heavy rain, Safety against Snake/Insect Bite Precautions during night working **at Monsoon Patrolling / Hot / Cold weather Patrolling etc**	1	**2**
1.7	Safety during working in Ghat sections. Personal safety- Dos & Don'ts	1	1
1.8	**Hands on**: Repairs to Trolley Refuges/ Man refuges	4	4
1.9	**Hands on**: Exchange of hand signals. Fixing detonators	4	4
1.1	**Field visit** for demonstration of various safety drills.	4	4
	PART – III RAILS, SLEEPERS, FASTENINGS & BALLAST	**23**	**23**
1.1	Types of rails, Fish plates, Fish bolts.	1	1
1.2	PSC sleepers for main line and other locations viz. level crossing, SEJ, bridge and its approach, turnout, sharp curves, etc.	2	2
1.3	Elastic Fastenings: Types of ERC – ERC mark III, ERC mark V, zero toe load, GJ clip. Rubber pads: Different types. Liners : Different types, GFN liners, metal liners, combination liners Modern elastic fastenings viz. Vossloh, Nabla etc.	2	2
1.4	Glued joints, Block Joint, SEJs, Points & Crossing.	2	2
1.5	**Model room** showing different types of rails, sleepers, elastic fastenings, SEJ, Glued joint, block joint, points and crossing.	2	2
1.6	**Field visit** for showing items mentioned at 1.5 above.	8	8
1.7	Ballast profile at different location, Steps to prevent Pedestrian/ Cattle Crossing	2	2
1.8	**Hands on** Ballast Handling, adjustment of ballast in profile, measurement of ballast cushion	4	4
	PART – IV LUBRICATION OF RAIL JOINTS	**14**	**14**
1.1	Lubrication of Rail Joints (IRPWM Para 241)	1	1
1.2	**Hands on**: Lubrication of Rail Joints	4	4
1.3	Greasing of ERCs, sealing of liners.	1	1
1.4	Painting of Rails and Welds.	1	1
1.5	Lubrication of gauge face of outer rail on curves, turnouts, SEJ etc.	1	1
1.6	**Hands on**: Lubrication of ERC, Curves, Turnouts, SEJ.	6	6
	PART – V TRACK MAINTENANCE ACTIVITIES	**57**	**57**
1.1	Through Packing (IRPWM Para 224), Slack Picking (IRPWM Para 229),	2	2
1.2	**Hands on**: Manual through packing.	8	8
1.3	Systematic Overhauling of Track(IRPWM Para227)	1	1
1.4	**Hands on**: Systematic Overhauling	4	4
1.5	Mobile Maintenance Units (IRPWM Para228)	1	1
1.6	Introduction to Small Track Machines. Safe operation of Small Track Machines available on Indian Railways on running track.	2	2
1.7	Basic knowledge regarding consumables being used in Small Track Machines.	1	1
1.8	**Hands on:** Repair & maintenance of Small Track machines, troubleshooting of Small Track machines.	4	4

TRAINING MODULE FOR INDUCTION COURSE (T-9) (Revised)

CATEGORY: TRACK MAINTAINER DURATION: 30 DAYS (240 PERIODS)

TOPIC	TOPIC DETAILS	Periods	
		Existing	Revised
1.9	**Hands on** training for operation of small Track Machines including weld trimmer, grinder, rail cutting, hole drilling, chamfering, etc.	4	4
1.1	Works involved in the maintenance of Points &Crossings, Curves, Level crossings and Bridges.	2	2
1.11	**CREEP**: Creep and its effect, pulling back of creep, fixing of anchors, recoupment of missing fittings, renewal of ineffective fittings.	1	1
1.12	Attention to SEJ, Glued Joints, insulated block joints.	1	1
1.13	Observance of Sleepers under passage of Traffic(IRPWM Para 230)	1	1
1.14	Observance of train for seized bearings/hot axles, hanging parts of rolling stock.		
1.15	**Technical films/ video clips/ photographs** showing various Track Maintenance activities.	1	1
1.16	**Hands on**: Casual rail renewal	4	4
1.17	**Hands on**: Casual sleeper renewal	4	4
1.18	**Hands on**: Measurement of Gauge, Cross level, Check-Rail Clearance, Versine, Cant.	2	2
1.19	**Hands on**: Change of Crossing and Switches in yards.	4	4
1.2	Welding of Rails.	2	2
1.21	**Hands on**: Assisting in welding of rail joint.	4	4
1.22	**Technical films/ video clips/ photographs** on use of weld trimmers &Grinders, Rail cutting machine, Rail drilling Machine, Chamfering machine, Impact Winch for bolt tightening, Toe load measurements.	2	2
1.23	**Hands on**: Maintenance in Electrified territories: precautions involved during maintenance of Track-Circuited sections, Felling/ Cutting/ Pruning of trees close to OHE	2	2
	PART – VI LONG AND SHORT WELDED RAILS (LWR/SWR)	**24**	**24**
1.1	Introduction to LWR/SWR track.	1	1
1.2	Rail temperature-types of Rail Thermometers, measurement of temperature and working range.	1	1
1.3	**Hands on**: Measurement of Rail temperature	1	1
1.4	Competency to carry out various Maintenance and Repair works in LWR.	1	1
1.5	Do's and Don'ts for LWR and SWR track.	2	2
1.6	Hot and Cold Weather Patrolling	1	1
1.7	Action to be taken in case of rail/weld failures.	1	1
1.8	**Hands on** : for attending emergency repair of rail/weld fracture	4	4
1.9	Action to be taken in case of buckling	1	1
1.1	De-stressing of LWR.	2	2
1.11	Different types of SEJ – Inspection and Maintenance	1	1
1.12	**Hands on**: Cold / Hot Weather Patrolling, Monsoon Patrolling.	8	8
	PART – VII RAIL FRACTURES AND WELD FAILURES	**7**	**7**
1.1	Introduction to Rail/ weld failures.	1	1
1.2	Marking of USFD Flaws, Action for protection / removal of defective welds/rails	2	2
1.3	**Hands on**: Attention to various types of USFD Flaws	4	4
	PART – VIII TRACK RENEWALS	**21**	**21**
1.1	Scope, activities involved & method for execution of Through Rail Renewal, Through Sleeper Renewal, Through Bridge Timber Renewal, Through Fittings Renewal, Through Turnout renewal	3	3
1.2	Deep Screening (IRPWM Para 238), Lifting/Lowering of track, **Working of Track machine such as BCM, SBCM, DTS, Unimat, T-28**	3	3
1.3	Working of Ballast Train / DMT working	2	2
1.4	**Hands on**: Ballast train/ EUR unloading.	8	8
1.5	**Technical films/ video clips/ photographs** of various types of Track machine on Railway	1	1
1.6	**Hands on**: Pre & Post tamping activities, Attention during Track-Machine tamping	4	4
	PART – IX LEVEL CROSSINGS	**10**	**10**
1.1	Classification of Level Crossing, Equipment at LC.	2	2
1.2	Visibility at LC, Speed breakers, Road sign boards and W/L boards at level crossings, Location of various LC Boards	1	1
1.3	Introduction to working of gateman, competency, Refresher & medical Examination.	1	1
1.4	Action during Gate failures, Height Gauge damage, Breakdown of vehicle at LC	1	1

TRAINING MODULE FOR INDUCTION COURSE (T-9) (Revised)

CATEGORY: TRACK MAINTAINER DURATION: 30 DAYS (240 PERIODS)

TOPIC	TOPIC DETAILS	Periods	
		Existing	Revised
1.5	**Technical films/ video clips/ photographs** showing operation of Level Crossing and its components.	1	1
1.6	**Hands on**: Visit to nearest level crossing	4	4
	PART – X PATROLLING OF TRACK (Ch-X of IRPWM)	**16**	**12**
1.1	Types of Patrolling	2	2
1.2	Duties of Patrolman, Equipment of patrolman. Reporting of unusual. Understanding of patrol chart and diary.	2	2
1.3	Action to be taken during emergency by Patrolman.	1	1
1.4	Duties of Stationary watchman at vulnerable location	1	1
1.5	**Hands on**: rainfall reading with rain gauge	2	2
1.6	**Hands on:** Patrolling Duty	8	4
	PART – XI Rail Dolly/Trolley/Dip Lorry Working	**15**	**11**
1.1	Working of Trolley, Lorry and Rail dolly.	2	2
1.2	**Technical films/ video clips/ photographs** on working of Rail Dolly/Dip Lorry.	1	1
1.3	**Hands on**: working of Trolley, Lorry, Rail dolly and Protection	4	4
1.4	**Tutorial on** preparation on various memo viz. track unsafe memo, caution order, track safe memo with caution order, etc.	8	4
	PART – XII BASICS OF SIGNALLING & PROTECTION OF TRACK	**13**	**13**
1.1	Various types of Signals& Their Aspects	2	2
1.2	Station limit, block sections, different types of territory (absolute/automatic).	1	1
1.3	Various method of protections: HS Flags, banner flags, HS lamp, detonator, tri-color torches, hooters etc.	1	1
1.4	Protection during short duration/long duration works.	2	2
1.5	Engineering Indicator boards for various speed restriction/ stop dead, Location of boards at work site.	2	2
1.6	**Hands on** for Fixing of Indicator Boards at Work site	4	4
1.7	Training on disaster management including fire safety.	1	1
	PART – XIII ESTABLISHMENT MATTER	**5**	**5**
1.1	Leave & Pass Rules	1	1
1.2	DAR	1	1
1.3	HOER	1	1
1.4	Avenues of career progression in Railways	1	1
1.5	Introduction to Civil defense organization in Railways	1	1
	PART – XIV FIRSTAID	**4**	**4**
1.1	Knowledge on medicines provided in first aid box. Training and demonstration on first aid to be given to injured having bone fractured/ dislocation, precaution while carrying injured staff in absence of stretcher.	4	4
	PART – XV MISCELLANEOUS	**4**	**4**
1	Exam, Viva-Voce, Reporting/Relieving etc.	4	4
2	**Self-development (physical & emotional)**		
2.1	Jogging/ yoga exercise one hour daily in morning session (7am to 8am).		
2.2	Breathing exercise, meditation, relaxation daily one hour in evening session (5.30pm to 6.30pm).		
	Grand Total	**240**	**240**
	NOTE: 30 days= 30 x 8 pds = 240 pds of 45mins each		

SUMMARY

A	**CLASSROOM LECTURES**	**95**	**103**
B	**TECHNICAL FILMS/ VIDEO CLIPS/ PHOTOGRAPHS**	**6**	**6**
C	**FIELD VISITS**	**12**	**12**
D	**HANDS ON**	**113**	**109**
E	**MODEL ROOM**	**2**	**2**
F	**TUTORIAL**	**8**	**4**
G	**MISCELLANEOUS**	**4**	**4**
	GRAND TOTAL	**240**	**240**

Note: *The aspect of personal safety is covered in Part-II- of both (Induction and Refresher) course modules, however to cover more safety aspects some additional topics are also added in the existing module like, working in Double / Multiple lines. safety during machine working, use of Rakshak and other such warning systems. safety during patrolling, safety while transporting materials and working with Cranes, JCBs, earth moving equipment etc For which the time period for personal safety in Induction Course has been increased from 21 periods to 29 periods (each duration 45 minutes) by suitably modifying the time allotted to other topics keeping total training duration unchanged as 30 days.*

It is also recommended that after completion of 30 days institutional training, newly recruited track maintainers, should also be given a 3 days practical safety training by the concerned JE/SSE P.Way supervisor before allowing them for field work. The same should be advised by divisions to SSE (P.Way) incharge.

TRAINING MODULE FOR REFRESHER COURSE T-10 (Revised)			
CATEGORY: TRACK MAINTAINER		DURATION: 6 DAYS (48 PERIODS)	
TOPIC	TOPIC DETAILS	Periods	
		Existing	Revised
	PART- I INTRODUCTION	**1**	**1**
1.1	Duties & Responsibilities of Track-Maintainer (IRPWM Para 149).	1	1
	PART- II PERSONAL SAFETY	**6**	**9**
1.1	Precaution during work on running lines, routine maintenance activity, handling/ transporting materials. **including Double / Multiple lines, vicinity of LCs, important major yards, shunting / marshalling lines etc.**	1	2
1.2	Precaution during Track machine working, working on sharp curves/ curves with poor visibility, working at accident spots, congested locations like bridge, tunnel **in High speed locations, Use of Rakshak and other such warning systems**	2	3
1.3	Precautions in track circuited areas, electrified areas, **including working with Cranes, JCBs, earth moving equipment etc.**	1	2
1.4	Safety during working in Ghat sections. Personal safety- Dos & Don'ts	1	1
1.5	Precaution while working during heavy rain, Precautions during night working.	1	1
	PART- III LUBRICATION OF RAIL JOINTS	**2**	**2**
1.1	**Hands on :** Lubrication of Rail Joints (IRPWM Para 241), Lubrication of gauge face of outer rail on Curves, Turnouts, SEJ etc. **Hands on:** Greasing of ERCs, sealing of liners, Painting of Rails and Welds.	2	2
	PART- IV TRACK MAINTENANCE ACTIVITIES	**9**	**9**
1.1	**Hands on:** Through Packing, Slack Picking, Systematic Overhauling of Track, Observance of Sleepers under passage of Traffic(IRPWM Para 230), Observance of train for seized bearings/hot axles, hanging parts of rolling stock.	2	2
1.2	**Hands on**: attention to points &Crossings	2	2
1.3	Introduction to Small Track Machines. Handling &Safe operation of Small Track Machines required specially during rail welding.	1	1
1.4	**Technical Film/ Video Clip/ Photographs** on use of weld trimmers &Grinders, chamfering machine, rail cutting, rail drilling impact winch for bolt tightening, toe load measurements	1	1
1.5	Attention to SEJ, Glued Joints, insulated block joints.	1	1
1.6	**Technical Film** on maintenance of concrete sleeper track and discussions.	2	2
	PART- V LONG AND SHORT WELDED RAILS (LWR/SWR)	**7**	6
1.1	Introduction to LWR/SWR track.	1	1
1.2	Rail temperature: types of rail thermometer, measurement of temperature, permitted temperature limits for carrying out various maintenance operations.	1	1
1.3	Do's and Don'ts for LWR and SWR track.	1	1
1.4	Hot and cold weather patrolling	1	1
1.5	Action to be taken in case of rail/weld failures & buckling	1	1
1.6	Different types of SEJ, De-stressing of LWR.	2	1
	PART- VI RAIL FRACTURES AND WELD FAILURES	**2**	**2**
1.1	Introduction to Rail/ weld failures.	1	1
1.2	Marking of USFD Flaws, Action for protection / removal of defective welds/rails	1	1
	PART- VII TRACK RENEWALS	**3**	**3**
1.1	Deep Screening (IRPWM Para 238), Lifting/Lowering of track (IRPWM Para 233/234).	2	2
1.2	Working of Ballast Train / DMT working	1	1

TRAINING MODULE FOR REFRESHER COURSE T-10 (Revised)			
CATEGORY: TRACK MAINTAINER		DURATION: 6 DAYS (48 PERIODS)	
TOPIC	TOPIC DETAILS	Periods	
		Existing	Revised
	PART- VIII LEVEL CROSSINGS	**3**	**3**
1.1	Classification of Level Crossing, Equipment at LC.	1	1
1.2	Visibility at LC, speed breakers, road sign boards and W/L boards at level crossings, Location of various LC Boards.	1	1
1.3	Duties of gatekeeper & action during gate failures, Height Gauge damage, Breakdown of vehicle at LC	1	1
	PART- IX PATROLLING OF TRACK	**4**	**4**
1.1	Types of Patrolling	1	1
1.2	Duties of Patrolman, Equipment of patrolman, Reporting of unusual, Understanding of patrol chart and diary.	1	1
1.3	Action to be taken during emergency by patrolman.	1	1
1.4	Duties of Stationary watchman at vulnerable location	1	1
	PART- X Rail Dolly/Trolley/Dip Lorry Working	**3**	**2**
1.1	Working of Trolley, Lorry and Rail dolly.	1	1
1.2	**Tutorial on** preparation on various memo viz. track unsafe memo, caution order, track safe memo with caution order etc.	2	1
	PART- XI BASICS OF SIGNALLING & PROTECTION OF TRACK	**3**	**3**
1.1	Various types of signals& Their Aspects Station limit, block sections, different types of territory (absolute/automatic).	1	1
1.2	Various method of protections: HS Flags, banner flags, HS lamp, detonator, tri-color torches, hooters, during short duration/long duration works etc.	1	1
1.3	Engineering Indicator boards for various speed restriction/ stop dead, Location of boards at work site.	1	1
	PART- XII FIRSTAID	**2**	**1**
1.1	Knowledge on medicines provided in first aid box. Training and demonstration on first aid to be given to injured having bone fractured/ dislocation, precaution while carrying injured staff in absence of stretcher.	2	1
	PART- XIII MISCELLANEOUS	**3**	**3**
1	Reporting, Valedictory, Exam, Viva-Voce, etc.	3	3
2	**Self-development (Physical & Emotional)**		
2.1	Jogging/ yoga exercise one hour daily in morning session (7am to 8 am).		
2.2	Breathing exercise, meditation, relaxation daily one hour in evening session (5.30pm to 6.30pm).		
	Grand Total	**48**	**48**
	NOTE: Total 6 days = 6 x 8 pds = 48 periods of 45mins each		

NOTE: *To cover more safety aspects some additional topics are also added in the existing Refresher module like safety while working in Double / Multiple lines, working with Cranes, JCBs, earth moving equipment etc. and use of Rakshak and other such warning systems, for which time period for personal safety in Refresher Course has been increased from 6 periods to 9 periods by suitably modifying the time allotted to other topics, keeping total training duration unchanged as 6 days.*