



PBC No: 05 / 2024 RBE No: 03 / 2024

# दक्षिण रेलवे Southern Railway प्रधान मुख्य कार्मिक अधिकारी कार्यालय Office of the Principal Chief Personnel Officer प्रधान कार्यालय, कार्मिक विभाग, चेन्नै-600003 Headquarters, Personnel Department, Chennai-600003

सं/No: P(R) 673 / Training / Vol.V

दिनांक/Dated: 18.01.2024

All PHODs/ DRMs/ CWMs/ CEWE/ CAO/ CPM/ PDA/ Dy.CPOs/ Sr.DPOs/ Secy to GM, Chairman/RRB/MAS,TVC, Addl.Registrar/RCT/MAS, Secretary/RRT/MAS, Principal MDZTI/TPJ, SRCETC/TBM, ZETTC/AVD, DPOs/SPOs/WPOs/APOs of HQ/Divisions /Workshops/Units.

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

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A copy of Railway Board's letter No.E(MPP)/2019/03/46 dated 09.01.2024 on the above subject is enclosed for information, guidance and necessary action.

Railway Board's letter dated 24.12.2021 referred therein has been circulated as PBC No. 201/2021.

संलग्नक/Encl.06 pages

#### सहायक कर्मचारी संबंधी अधिकारी/Asst Personnel Officer / IR & Trg.

कृते प्रमुकाधि/For Principal Chief Personnel Officer

प्रतिलिपि/Copy to: The General Secretary/SRMU The General Secretary/AISCTREA The General Secretary/AIOBCREA The General Secretary/NFIR IT Section/PB/HQ - to upload in the SR website.

RBE No. 03 2024



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

#### No. E (MPP)/2019/03/46

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 New Delhi, dated: 09.01.2024

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 <u>MPP Training Circulars</u>.

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 <u>MPP Training Circulars</u> 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)

(Amit Singh Mehra) Director/Man Power Planning

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

	ORY: TRACK MAINTAINER DURATION: 30 DAYS (240 P	Periods	
OPIC	TOPIC DETAILS	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 - IL 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	1	2
1.3	including while working in Block, Speed Restriction etc Precaution during Track machine working including pre, post and during tamping,	2	4
1.4	BCM working, sharp look out on adjoining lines etc Precaution during working on sharp Curves/Curves with poor visibility. Precaution during working at accident spots, congested locations like bridge, tunnel. in High speed	1	3
	locations, Use of Rakshak and other such warning systems Precautions in track circuited areas, electrified areas. Including working with Cranes,	2	-
1.5	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
1.1	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
	Glued joints, Block Joint, SEJs, Points & Crossing.	2	2
1.4	Model room showing different types of rails, sleepers, elastic fastenings, SEJ, Glued	2	2
	joint, block joint, points and crossing.	8	8
1.6	Field visit for showing items mentioned at 1.5 above. Ballast profile at different location, Steps to prevent Pedestrian/ Cattle Crossing	2	2
1.7	Hands on Ballast Handling, adjustment of ballast in profile, measurement of ballast		4
_	PART - IV LUBRICATION OF RAIL JOINTS	14	14
	Lubrication of Rail Joints (IRPWM Para 241)	1	1
1.1		4	4
1.2	Greasing of ERCs, sealing of liners.	1	1
1.3	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
1.0	PART - V TRACK MAINTENANCE ACTIVITIES	57	57
1.1	Through Packing (IRPWM Para 224), Slack Picking (IRPWM Para 229),	2	2
1.2		8	8
1.3		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.	1	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	4	4

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

1.9         rail cutting. h           1.1         Works involvents           Bridges.         CREEP: Cremissing fitting           1.12         Attention to S           1.13         Observance           1.14         Observance           1.15         Technical flactivities.           1.16         Hands on: O           1.17         Hands on: O           1.18         Hands on: O           1.19         Hands on: O           1.18         Hands on: O           1.19         Hands on: O           1.20         Welding of E           1.21         Hands on: O           1.22         Welding of E           1.21         Hands on: A           Technical flactivities.         Technical flactivities.           1.21         Hands on: A           Technical flactivities.         Technical flactivities.           1.21         Hands on: A           Technical flactivities.         Technical flactivities.           1.22         Welding of D           1.3         Hands on: A           Technical flactivities.         Technical flactivities.           1.3         Hands on: A           Technical flactivities. <td< th=""><th rowspan="2">TOPIC DETAILS</th><th colspan="2">Periods</th></td<>	TOPIC DETAILS	Periods	
1.9       rail cutting. h         1.1       Works involve Bridges.         1.11       CREEP: Cremissing fitting         1.12       Attention to S         1.13       Observance         1.14       Observance         1.15       Technical flactivities.         1.16       Hands on: O         1.17       Hands on: O         1.18       Hands on: O         1.19       Hands on: O         1.20       Welding of Flactivities.         1.17       Hands on: O         1.18       Hands on: O         1.21       Hands on: O         1.22       Welding of Flactivities.         1.21       Hands on: O         1.22       Welding of Flactivities.         1.23       Hands on: O         1.24       Hands on: O         1.25       Do's and Do         1.4       Competency         1.5       Do's and Do         1.6       Hot and Col         1.7       Action to be         1.1       Introduction         1.2       Marking of I         1.3       Hands on: A         1.4       Competency         1.5       Scope, act		Existing	Revised
1.1       Works involver Bridges.         1.11       CREEP: Cremissing fitting         1.12       Attention to S         1.13       Observance         1.14       Observance         1.15       Technical flactivities.         1.16       Hands on: O         1.17       Hands on: O         1.18       Hands on: O         1.19       Hands on: O         1.20       Welding of F         1.21       Hands on: O         1.22       Welding of F         1.23       Hands on: A         Technical fl       Cutting mac         1.21       Hands on: A         Technical fl       Scope, acti         1.21       Hands on: A         Technical fl       Scope, acti         1.21       Hands on: A         1.22       cutting mac         1.3       Hands on: A         1.4       Competency         1.5       Do's and Do         1.6       Hot and Col         1.7       Action to be         1.8       Hands on: A         1.9       Action to be         1.1       Introduction         1.2       Marking of A </td <td>aining for operation of small Track Machines including weld trimmer, grinder, tole drilling, chamfering, etc.</td> <td>4</td> <td>4</td>	aining for operation of small Track Machines including weld trimmer, grinder, tole drilling, chamfering, etc.	4	4
1.11       CREEP: Cremissing fitting         1.12       Attention to S         1.13       Observance         1.14       Observance         1.15       Technical f         activities.       Infe         1.16       Hands on: O         1.17       Hands on: O         1.18       Hands on: O         1.19       Hands on: O         1.21       Hands on: O         1.22       Welding of F         1.21       Hands on: O         1.22       Welding of F         1.23       Hands on: O         1.24       Hands on: O         1.25       Welding of F         1.20       Welding of F         1.21       Hands on: A         1.22       Welding of F         1.23       Hands on: A         1.24       Hands on: A         1.25       Do's and Do         1.4       Competency         1.5       Do's and Do         1.6       Hot and Col         1.7       Action to be         1.8       Hands on: A         1.9       Action to be         1.1       Different typ         1.12 <td< td=""><td>ved in the maintenance of Points &amp; Crossings, Curves, Level crossings and</td><td>2</td><td>2</td></td<>	ved in the maintenance of Points & Crossings, Curves, Level crossings and	2	2
1.12       Attention to S         1.13       Observance         1.14       Observance         1.15       Technical fractivities.         1.16       Hands on: C         1.17       Hands on: C         1.18       Hands on: C         1.20       Welding of F         1.21       Hands on: C         1.22       Welding of F         1.23       Technical fractivities.         1.24       Hands on: A         1.25       cutting mac         1.26       rennical fractivities.         1.27       Hands on: A         1.28       Technical fractivities.         1.29       Hands on: A         1.20       cutting mac         1.21       Hands on: A         1.22       cutting mac         1.23       Hands on: A         1.2       range.         1.3       Hands on: A         1.4       Competency         1.5       Do's and Do         1.6       Hot and Col         1.7       Action to be         1.1       Different typ         1.12       Hands on: A         1.14       Deestressing	sep and its effect, pulling back of creep, fixing of anchors, recoupment of gs, renewal of ineffective fittings.	1	1
1.13         Observance           1.14         Observance           1.15         Technical factivities.           1.16         Hands on: 0           1.17         Hands on: 0           1.18         Hands on: 0           1.19         Hands on: 0           1.20         Welding of R           1.21         Hands on: 0           1.22         Welding of R           1.23         Hands on: 0           1.24         Hands on: 0           1.25         Cutting mac           tightening, T         Technical fa           1.22         cutting mac           tightening, T         Hands on: 0           1.23         Hands on: 1           1.24         Rail tempera           range.         1.3           1.3         Hands on: 1           1.4         Competency           1.5         Do's and Do           1.6         Hot and Col           1.7         Action to be           1.8         Hands on: 1           1.9         Action to be           1.1         Introduction           1.2         Marking of 1           1.3         Hands on: 1 </td <td>SEJ, Glued Joints, insulated block joints.</td> <td>1</td> <td>1</td>	SEJ, Glued Joints, insulated block joints.	1	1
1.14         Observance activities.           1.15         Technical factivities.           1.16         Hands on: 0           1.17         Hands on: 0           1.18         Hands on: 0           1.19         Hands on: 0           1.18         Hands on: 0           1.2         Welding of R           1.21         Hands on: 0           1.22         Welding of R           1.21         Hands on: 0           1.22         Welding of R           1.21         Hands on: 0           1.22         Welding of R           1.23         Hands on: 0           1.24         Hands on: 1           1.25         Cutting mac           1.26         range.           1.3         Hands on: 1           1.4         Competency           1.5         Do's and Do           1.6         Hot and Col           1.7         Action to be           1.8         Hands on: 1           1.9         Action to be           1.1         Introduction           1.2         Marking of 1           1.1         Introduction           1.2         Marking of 1	of Sleepers under passage of Traffic(IRPWM Para 230)	1	1
1.15       activities.         1.16       Hands on: 0         1.17       Hands on: 0         1.18       Hands on: 0         1.19       Hands on: 0         1.2       Welding of R         1.21       Hands on: 0         1.2       Welding of R         1.21       Hands on: 0         1.22       cutting mac tightening, T         1.23       Hands on: 0         1.24       Hands on: 0         1.25       cutting mac tightening, T         1.23       Hands on: 0         1.24       Rail tempera range.         1.3       Hands on: 1         1.4       Competency name.         1.5       Do's and Do         1.6       Hot and Col         1.7       Action to be         1.8       Hands on: 1         1.9       Action to be         1.1       Introduction         1.2       Marking of 1         1.3       Hands on: 1         1.4       De-stressing         1.1       Introduction         1.2       Marking of 1         1.3       Hands on: 1         1.4       Hands on: 1         1.	of train for seized bearings/hot axles, hanging parts of rolling stock. films/ video clips/ photographs showing various Track Maintenance		
1.17       Hands on: C         1.18       Hands on: M         1.19       Hands on: M         1.2       Welding of F         1.21       Hands on: M         Technical ff       Cutting mac         tightening, T       Hands on: M         1.22       cutting mac         tightening, T       Hands on: M         1.23       Hands on: M         1.24       Hands on: M         1.25       Cutting mac         1.3       Hands on: M         1.4       Competency         1.5       Do's and Do         1.6       Hot and Col         1.7       Action to be         1.8       Hands on: M         1.9       Action to be         1.1       De-stressing         1.11       Different typ         1.12       Hands on: M         1.2       Marking of U         1.3       Hands on: M         1.4       De-stressing         1.11       Introduction         1.2       Marking of U         1.3       Hands on: M         PART - VIII       Scope, acti         1.1       Steeper Re         Turnout r			1
1.18       Hands on: M         1.19       Hands on: O         1.2       Welding of F         1.21       Hands on: A         Technical ff       Technical ff         1.22       cutting maching, T         1.23       Hands on: A         maintenance       PART – VI L         1.1       Introduction         1.2       Rail temperating, T         1.3       Hands on: N         1.4       Competency         1.5       Do's and Do         1.6       Hot and Col         1.7       Action to be         1.8       Hands on: N         1.9       Action to be         1.1       De-stressing         1.11       Introduction         1.2       Marking of U         1.3       Hands on: A         1.4       De-stressing         1.1       Introduction         1.2       Marking of U         1.3       Hands on: A         PART - VIII       Scope, acti         1.1       Steeper Re         Turnout ren       L2         1.3       Working of         1.4       Hands on:         1.5	Casual rail renewal	4	
1.19       Hands on: C         1.2       Welding of F         1.21       Hands on: A         Technical ff       Cutting mac         tightening, T       Hands on: A         1.23       Hands on: A         1.24       Rail tempera         1.3       Hands on: A         1.4       Competency         1.5       Do's and Do         1.6       Hot and Col         1.7       Action to be         1.8       Hands on: A         1.9       Action to be         1.1       Deferent typ         1.12       Hands on: A         1.1       Deferent typ         1.1       Introduction         1.2       Marking of I         1.3       Hands on: A         PART - VII       Scope, acti         1.1       Introduction         1.2       Scope, acti         1.1       Sleeper Re         Turnout ren       L         1.2       Deep Scre         machine su       A	Casual sleeper renewal	4	4
1.2       Welding of F         1.21       Hands on: A         Technical fi       Cutting maching, T         1.23       Hands on: M         1.23       Hands on: M         1.23       Hands on: M         1.23       Hands on: M         1.21       Introduction         1.22       Rail temperation         1.3       Hands on: M         1.4       Competency         1.5       Do's and Do         1.6       Hot and Col         1.7       Action to be         1.8       Hands on: M         1.9       Action to be         1.1       Deferent typ         1.12       Hands on: M         1.13       Hands on: M         1.14       Deferent typ         1.15       Raiking of M         1.1       Introduction         1.2       Marking of M         1.3       Hands on: M         PART - VII       Scope, acti         1.1       Scope, acti         1.1       Scope, acti         1.1       Scope, acti         1.2       Beeper Scremachine st         1.3       Working of         1.4	Measurement of Gauge, Cross level, Check-Rail Clearance, Versine, Cant.	2	2
1.2       Welding of F         1.21       Hands on: A         Technical fi       Cutting maching, T         1.23       Hands on: M         1.23       Hands on: M         1.23       Hands on: M         1.23       Hands on: M         1.21       Introduction         1.22       Rail temperation         1.3       Hands on: M         1.4       Competency         1.5       Do's and Do         1.6       Hot and Col         1.7       Action to be         1.8       Hands on: M         1.9       Action to be         1.1       Deferent typ         1.12       Hands on: M         1.13       Hands on: M         1.14       Deferent typ         1.15       Raiking of M         1.1       Introduction         1.2       Marking of M         1.3       Hands on: M         PART - VII       Scope, acti         1.1       Scope, acti         1.1       Scope, acti         1.1       Scope, acti         1.2       Beeper Scremachine st         1.3       Working of         1.4	Change of Crossing and Switches in yards.	4	4
1.21       Hands on: A         Technical fi       Cutting maching         1.22       ruting maching         1.23       Hands on: maintenance         PART - VI L       Introduction         1.2       Rail temperation         1.2       Rail temperation         1.3       Hands on: M         1.4       Competency         1.5       Do's and Do         1.6       Hot and Cole         1.7       Action to be         1.8       Hands on: M         1.9       Action to be         1.1       Different typ         1.12       Hands on: M         1.11       Different typ         1.12       Hands on: M         1.11       Different typ         1.12       Hands on: M         1.11       Different typ         1.12       Hands on: M         1.13       Hands on: Marking of M         1.2       Scope, acti         1.3       Hands on: Marking of M         1.3       Working of         1.4       Hands on: Marking of         1.5       Technical Railway         1.6       Hands on: PART - IX         1.6       H		2	2
Technical fi         1.22       cutting maching maching maintenance         1.23       Hands on:         1.23       Hands on:         1.21       Introduction         1.2       Rail temperarange.         1.3       Hands on:         1.4       Competency         1.5       Do's and Do         1.6       Hot and Col         1.7       Action to be         1.8       Hands on:         1.9       Action to be         1.1       Different typ         1.12       Hands on:         1.9       Action to be         1.1       Different typ         1.11       Different typ         1.12       Hands on:         PART - VII         1.1       Introduction         1.2       Marking of I         1.3       Hands on:         PART - VIII         1.1       Scope, acti         1.1       Steeper Remachine su         1.3       Working of         1.4       Hands on:         1.5       Technical         Railway       1.6         Hands on:       PART - IX         1.6 <td< td=""><td>Assisting in welding of rail joint.</td><td>4</td><td>4</td></td<>	Assisting in welding of rail joint.	4	4
1.23     maintenance       PART - VI L     1.1       1.1     Introduction       1.2     Rail temperarange.       1.3     Hands on: N       1.4     Competency       1.5     Do's and Do       1.6     Hot and Col       1.7     Action to be       1.8     Hands on: 1       1.9     Action to be       1.1     Different typ       1.12     Hands on: 1       1.13     De-stressing       1.11     Different typ       1.12     Hands on: 1       PART - VII     1.1       1.11     Different typ       1.12     Hands on: 1       PART - VII     1.1       1.1     Scope, acti       1.2     Deep Scremachine si       1.3     Working of       1.4     Hands on:       1.5     Technical       Railway     1.6       Hands on:     PART - IX       1.6     Hands on:       PART - IX     Classificatio	films/ video clips/ photographs on use of weld trimmers & Grinders, Rail chine, Rail drilling Machine, Chamfering machine, Impact Winch for bolt foe load measurements.	2	2
1.1       Introduction         1.2       Rail temperarange.         1.3       Hands on: Name         1.4       Competency         1.5       Do's and Do         1.6       Hot and Coll         1.7       Action to be         1.8       Hands on: Name         1.9       Action to be         1.1       De-stressing         1.11       Different typ         1.12       Hands on: Call         PART - VII       Narking of I         1.3       Hands on: Call         PART - VII       Scope, acti         1.1       Sleeper Rear         Turnout rem       Deep Screare         1.3       Working of         1.4       Hands on: Call         1.3       Working of         1.4       Hands on: Call         1.3       Working of         1.4       Hands on: Call         1.5       Technical         Railway       1.6         Hands on:       PART - IX         1.1       Classificatio         Vieibility at       Vieibility at	: Maintenance in Electrified territories: precautions involved during e of Track-Circuited sections, Felling/ Cutting/ Pruning of trees close to OHE	~	2
1.2     Rail temperarange.       1.3     Hands on: N       1.4     Competency       1.5     Do's and Do       1.6     Hot and Coll       1.7     Action to be       1.8     Hands on: N       1.9     Action to be       1.1     De-stressing       1.11     Different typ       1.12     Hands on: O       PART - VII     Narking of I       1.3     Hands on: O       PART - VIII     Scope, acti       1.1     Sleeper Re       Turnout rem     Deep Scre       machine su     Norking of       1.4     Hands on: O       1.3     Working of       1.4     Hands on: O       1.5     Technical Railway       1.6     Hands on: O       PART - IX     Norking of	LONG AND SHORT WELDED RAILS (LWR/SWR)	24	24
1.2     Rail temperarange.       1.3     Hands on: N       1.4     Competency       1.5     Do's and Do       1.6     Hot and Coll       1.7     Action to be       1.8     Hands on: N       1.9     Action to be       1.1     De-stressing       1.11     Different typ       1.12     Hands on: O       PART - VII     Narking of I       1.3     Hands on: O       PART - VIII     Scope, acti       1.1     Sleeper Re       Turnout rem     Deep Scre       machine su     1.3       Working of     1.4       Hands on:     1.5       Technical Railway       1.6     Hands on:       PART - IX       1.1     Classificatid	to LWR/SWR track.	1	1
1.3         Hands on: N           1.4         Competency           1.5         Do's and Do           1.6         Hot and Cold           1.7         Action to be           1.8         Hands on :           1.9         Action to be           1.1         De-stressing           1.11         Different typ           1.12         Hands on :           PART - VII         1.1           1.1         Introduction           1.2         Marking of I           1.3         Hands on :           PART - VIII         Scope, acti           1.1         Sleeper Re           Turnout rem         Deep Scre           machine su         1.3           Working of         1.4           Hands on:         1.5           Technical Railway         1.6           Hands on:         PART - IX	ature-types of Rail Thermometers, measurement of temperature and working	1	1
1.4         Competency           1.5         Do's and Do           1.6         Hot and Coli           1.7         Action to be           1.8         Hands on :           1.9         Action to be           1.1         De-stressing           1.11         Different typ           1.12         Hands on :           PART - VII           1.1         Introduction           1.2         Marking of I           1.3         Hands on :           PART - VIII           Scope, acti           1.1         Sleeper Re           Turnout ren           1.2         Deep Scre           machine su           1.3         Working of           1.4         Hands on:           1.3         Working of           1.4         Hands on:           1.5         Technical Railway           1.6         Hands on:           PART - IX           Classificatio           Vieibility at	Measurement of Rail temperature	1	1
1.5         Do's and Do           1.6         Hot and Coll           1.7         Action to be           1.8         Hands on :           1.9         Action to be           1.1         De-stressing           1.11         Different typ           1.12         Hands on :           PART - VII         PART - VII           1.1         Introduction           1.2         Marking of I           1.3         Hands on :           PART - VIII         Scope, acti           1.1         Sleeper Re           Turnout rem         Deep Scre           machine su         1.3           Working of         1.4           Hands on:         1.5           Technical Railway         1.6           Hands on:         PART - IX           1.6         Hands on:           PART - IX         Classificatio	y to carry out various Maintenance and Repair works in LWR.	1	1
1.6       Hot and Col         1.7       Action to be         1.8       Hands on :         1.9       Action to be         1.1       De-stressing         1.11       Different typ         1.12       Hands on :         PART - VII         1.1       Introduction         1.2       Marking of I         1.3       Hands on :         PART - VIII         Scope, acti         1.1       Steeper Re         Turnout ren         1.2       Deep Scre         machine su         1.3       Working of         1.4       Hands on:         1.3       Working of         1.4       Hands on:         1.5       Technical Railway         1.6       Hands on:         PART - IX       Classification         Vieibility at       Vieibility at	on'ts for LWR and SWR track.	2	2
1.7     Action to be       1.8     Hands on :       1.9     Action to be       1.1     De-stressing       1.11     Different typ       1.12     Hands on :       PART - VII       1.11     Introduction       1.2     Marking of I       1.3     Hands on :       PART - VIII       1.3     Hands on :       PART - VIII       Scope, acti       1.1     Sleeper Re       Turnout ren       1.2     Deep Scre       machine su       1.3     Working of       1.4     Hands on:       1.5     Technical       Railway       1.6     Hands on:       PART - IX       1.1     Classificatio       Vieibility at		1	1
1.8       Hands on :         1.9       Action to be         1.1       De-stressing         1.11       Different typ         1.12       Hands on :         PART - VII         1.1       Introduction         1.2       Marking of U         1.3       Hands on :         PART - VIII         Scope, acti         1.1       Sleeper Re         Turnout ren         Deep Scre         machine su         1.3       Working of         1.4       Hands on:         1.5       Technical Railway         1.6       Hands on:         PART - IX         1.1       Classificatio	Id Weather Patrolling	1	1
1.9     Action to be       1.1     De-stressing       1.11     Different typ       1.12     Hands on: 0       PART - VII     PART - VII       1.1     Introduction       1.2     Marking of U       1.3     Hands on: 0       PART - VIII     Scope, acti       1.1     Sleeper Re       Turnout ren     Deep Scre       1.3     Working of       1.4     Hands on: 1       1.3     Working of       1.4     Hands on: 1       1.5     Technical Railway       1.6     Hands on: 1       PART - IX     I.1       Classification     Vieibility at	taken in case of rail/weld failures.	4	4
1.1     De-stressing       1.11     Different typ       1.12     Hands on: (       PART - VII     PART - VII       1.1     Introduction       1.2     Marking of (       1.3     Hands on: (       PART - VIII     Scope, acti       1.1     Sleeper Re       Turnout ren     Deep Scre       1.2     Working of       1.4     Hands on: (       1.3     Working of       1.4     Hands on: (       1.5     Technical Railway       1.6     Hands on: (       PART - IX     1.1       Classificatio     Vieibility at	for attending emergency repair of rail/weld fracture	1	1
1.11     Different typ       1.12     Hands on: (       PART - VII       1.1     Introduction       1.2     Marking of (       1.3     Hands on: (       PART - VIII       1.3     Hands on: (       PART - VIII       1.3     Beeper Regent       Turnout ren       1.2     Deep Scremachine si       1.3     Working of       1.4     Hands on: (       1.5     Technical Railway       1.6     Hands on: (       PART - IX     1.1       Classification       Vieibility at	a taken in case of buckling		2
1.12     Hands on: (       PART - VII       1.1     Introduction       1.2     Marking of I       1.3     Hands on: (       PART - VIII     Scope, acti       1.1     Sleeper Re       Turnout ren     Deep Scre       1.2     Deep Scre       machine si     1.3       1.3     Working of       1.4     Hands on:       1.5     Technical Railway       1.6     Hands on:       PART - IXI     Classification       Vieibility at     Vieibility at		2	_
PART - VII 1.1 Introduction 1.2 Marking of U 1.3 Hands on: A PART - VIII Scope, acti 1.1 Sleeper Re Turnout ren 1.2 Deep Scre machine si 1.3 Working of 1.4 Hands on: 1.5 Technical Railway 1.6 Hands on: PART - IXI Classificatio Visibility at	pes of SEJ – Inspection and Maintenance	1	1
1.1     Introduction       1.2     Marking of U       1.3     Hands on: A       PART - VIII     Scope, acti       1.1     Steeper Re       Turnout ren     Deep Scre       machine st     Marking of       1.3     Working of       1.4     Hands on: A       1.5     Technical Railway       1.6     Hands on: PART - IX       1.1     Classification       Vieibility at	Cold / Hot Weather Patrolling, Monsoon Patrolling.	8	8
1.2     Marking of U       1.3     Hands on: A       PART - VIII     Scope, acti       1.1     Sleeper Re       Turnout ren     Deep Scre       1.2     Deep Scre       machine su     Interview       1.3     Working of       1.4     Hands on:       1.5     Technical Railway       1.6     Hands on:       PART - IX       1.1     Classificatio       Vieibility at	RAIL FRACTURES AND WELD FAILURES	7	7
1.2     Marking of U       1.3     Hands on: A       PART - VIII     Scope, acti       1.1     Sleeper Re       Turnout ren     Deep Scre       1.2     Deep Scre       machine su     Interview       1.3     Working of       1.4     Hands on:       1.5     Technical Railway       1.6     Hands on:       PART - IX       1.1     Classificatio       Vieibility at	to Rail/ weld failures.	1	1
1.3     Hands on: /       PART - VIII       Scope, acti       1.1     Sleeper Re       Turnout ren       1.2     Deep Scre       machine su       1.3     Working of       1.4     Hands on:       1.5     Technical       Railway       1.6     Hands on:       PART - IX       Vieibility at	USFD Flaws, Action for protection / removal of defective welds/rails	2	2
PART - VIII Scope, acti Scope, acti Sleeper Re Turnout ren 1.2 Deep Scre machine su 1.3 Working of 1.4 Hands on: 1.5 Technical Railway 1.6 Hands on: PART - IX 1.1 Classificatio	Attention to various types of USFD Flaws	4	4
Scope, acti       1.1     Sleeper Rei       Turnout ren       1.2     Deep Screimachine stress       1.3     Working of       1.4     Hands on:       1.5     Technical Railway       1.6     Hands on:       PART - IX       1.1     Classificatio       Vieibility at	I TRACK RENEWALS	21	21
1.2     machine su       1.3     Working of       1.4     Hands on:       1.5     Technical Railway       1.6     Hands on:       PART - IX       1.1     Classification       Viebality at	ivities involved & method for execution of Through Rail Renewal, Through enewal, Through Bridge Timber Renewal, Through Fittings Renewal, Through	n n 3	3
1.3     Working of       1.4     Hands on:       1.5     Technical Railway       1.6     Hands on:       PART - IX       1.1     Classificatio       Vieibility at	ening (IRPWM Para 238), Lifting/Lowering of track. Working of Track uch as BCM, SBCM, DTS, Unimat, T-28	× 3	3
1.4     Hands on:       1.5     Technical Railway       1.6     Hands on:       PART - IX       1.1     Classificatio       Vieibility at	Ballast Train / DMT working	2	2
Technical Railway           1.6         Hands on:           PART - IX         I.1           Classificatio         Vieibility at	Ballast train/ EUR unloading.	8	8
1.6 Hands on: PART – IX 1.1 Classificatio	films/ video clips/ photographs of various types of Track machine or	1	1
PART – IX 1.1 Classificatio	Pre & Post tamping activities, Attention during Track-Machine tamping	4	4
1.1 Classification		10	10
Visibility at	LEVEL CROSSINGS	2	2
	on of Level Crossing, Equipment at LC. t LC, Speed breakers, Road sign boards and W/L boards at level crossings		1
Location of	f various LC Boards	-	-
	n to working of gateman, competency, Refresher & medical Examination. ng Gate failures, Height Gauge damage, Breakdown of vehicle at LC	1	1

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

	SORY: TRACK MAINTAINER DURATION: 30 DAYS (240 P	Periods	
OPIC	TOPIC DETAILS	Existing R	evised
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
1.0	PART – XI Rail Dolly/Trolley/Dip Lorry Working	15	11
		2	2
1.1	Working of Trolley, Lorry and Rail dolly. Technical films/ video clips/ photographs on working of Rail Dolly/Dip Lorry.	1	1
1.2	Technical films/ video clips/ photographs on working of Rail controlp cony.	4	4
1.3	Hands on: working of Trolley, Lorry, Rail dolly and Protection Tutorial on preparation on various memo viz. track unsafe memo, caution order, track	8	4
100	safe memo with caution order, etc.	42	13
	PART - XII BASICS OF SIGNALLING & PROTECTION OF TRACK	13	2
1.1	Various types of Signals& Their Aspects		1
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
1.4	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
1.1	PART – XIII ESTABLISHMENT MATTER	5	5
1.1	Leave & Pass Rules	1	1
		1	1
1.2	DAR HOER	1	1
1.3	Avenues of career progression in Railways	1	1
1.4	Introduction to Civil defense organization in Railways	1	1
1.5	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)		
	Jogging/ yoga exercise one hour daily in morning session (7am to 8am).		
2.1	Breathing exercise, meditation, relaxation daily one hour in evening session (5.30pm to 6.30pm).		
	Grand Total	240	24
-	NOTE: 30 days= 30 x 8 pds = 240 pds of 45mins each		
_	SUMMARY		
		95	10
A	CLASSROOM LECTURES	6	6
В	TECHNICAL FILMS/ VIDEO CLIPS/ PHOTOGRAPHS	12	12
С	FIELD VISITS	113	10
D	HANDS ON		
E	MODEL ROOM	2	2
F	TUTORIAL	8	4
G	MISCELLANEOUS	4	4
	GRAND TOTAL	240	24

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.

- 3-

ATEG	TRAINING MODULE FOR REFRESHER COURSE T-10 (Revised) ORY: TRACK MAINTAINER DURATION: 6 DAYS (48 PI		
And a second			riods
OPIC	TOPIC DETAILS	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
1.0	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
	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
1.3	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
1.1	PART- VII TRACK RENEWALS Deep Screening (IRPWM Para 238), Lifting/Lowering of track (IRPWM Para	3 a 2	2
1.1	233/234).		-
1.2	Working of Ballast Train / DMT working	1	1

	TRAINING MODULE FOR REFRESHER COURSE T-10 (Revised)	-	
ATEG	ORY: TRACK MAINTAINER DURATION: 6 DAYS (48 P		riods
OPIC	TOPIC DETAILS	Existing	
		3	3
	PART- VIII LEVEL CROSSINGS	1	1
1.1 1.2	Classification of Level Crossing, Equipment at LC. 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
1.4	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.	1 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.

- 5 -

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