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भारत सरकार – रेल मंत्रालय
GOVERNMENT OF INDIA - MINISTRY OF RAILWAYS



ट्रैक मेंटेनर के लिए प्रवेश पाठ्यक्रम

INDUCTION COURSE FOR TRACK MAINTAINER



हस्त पुस्तिका भाग 2: व्यक्तिगत संरक्षा

Booklet Part II: Personal Safety

केमटेक/2025/सि/ट्रैक मेंटेनर के लिए प्रवेश पाठ्यक्रम भाग – 2 - व्यक्तिगत संरक्षा/ 1.0

CAMTECH/2025/C/Induction Course Track Maintainer Part-2- Personal Safety/1.0

जून **JUNE 2025**

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EXCELLENCE IN MAINTENANCE
INDIAN RAILWAYS

ट्रैक मैंटेनर के लिए इंडक्शन कोर्स

हस्त पुस्तिका भाग 2: व्यक्तिगत संरक्षा

Induction course for Track Maintainer

Booklet Part II: Personal Safety

FOREWORD

Indian Railway holds the major chunk of civil engineering assets in the country in the form of structure and railway track. Tracks were maintained by Permanent way staff by the track maintainers under the guidance of SSE/JE (P.Way). Safety of track is the prime responsibility of such track maintainer.

CAMTECH has made a nice attempt to provide all the information about the “Personal safety” and safety precautions during the work to Track Maintainer, who has joined in the railway as initial posting as per revised training module approved by Railway board vide RBE 03/2024 letter No. E(MPP)2019/3/46 dated 09.01.2024.

Efforts have been made to fulfil the requirement of induction course of track maintainer (T-9) Part II: Personal Safety.

I hope this handbook will certainly prove to be a valuable source of technical knowledge and will be quite helpful for Track maintainer woring in engineering department in Indian Railway.

CAMTECH/Gwalior ***(Adarsh Khare)***
Date: June, 2025 ***Principal Executive Director***

PREFACE

Indian Railway having a vast network of rail track spread all over India. Whole track were maintained by Permanent way staff like SSE/JE/Mate/Keyman, Gateman, and the Track Maintainers. Safety of track is the prime responsibility of such staff.

Railway Board vide RBE 03/2024 letter No. E(MPP)2019/3/46 dated 09.01.2024 has approved the revised training modules for induction training course of Track Maintainers (T-9) of Indian Railway. This booklet has been prepared to fulfil the requirement of Part II: Personal Safety of induction course of track maintainer (T-9).

Every effort has been made to make this booklet useful to track maintainer working in engineering department as per the training module for non gazetted employee of civil engineering department approved by Railway Board, T-9 induction course for track maintainer

This booklet does not supersede any existing information on subject issued by Railway Board, RDSO, IRPWM and Indian standards available on the subject. This book is not statutory& contents are for the purpose of guidance only. Most of the data, sketch and information mentioned here are available in some form or the other in various books or printed matter.

This booklet is the result of sincere efforts of Shri D.K.Shrivastava, SSE/CAMTECH, who collected and compiled information, data, etc. from different sources, and went through the complete text.

We welcome valuable suggestions from our readers for further improvements.

CAMTECH/Gwalior **(Deepak Mehra)**
Date: 26.06.2025 Director/Civil

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संशोधन पर्चियों का प्रकाशन

ISSUE OF CORRECTION SLIPS

इस हस्तपुस्तिका के लिए भविष्य में प्रकाशित होने वाली संशोधन पर्चियों को निम्नानुसार संख्यांकित किया जाएगा :

The correction slips to be issued in future for this handbook will be numbered as follows:

केमटेक/2025/सि/ट्रैक मैंटेनर के लिए प्रवेश पाठ्यक्रम भाग -ii/पीएस/1.0/सीएस# XX
दिनांक_____

CAMTECH/2025/C/Induction course track maintainer part **-** ii/**PS/**CS # XX
date_____

जहाँ XX संबन्धित संशोधन पर्ची की क्रम संख्या है (01 से प्रारम्भ होकर आगे की ओर)

Where "XX" is the serial number of the concerned correction slip (starting from 01 onwards).

प्रकाशित संशोधन पर्चियाँ

CORRECTION SLIPS ISSUED

क्र.सं./ Sr. No.	**प्रकाशन दिनांक/ Date of issue**	**संशोधित पृष्ठ संख्या तथा मद संख्या/ Page No. and Item No. modified**	**टिप्पणी/ Remarks**

आपको सदैव सावधान रहना है।

सावधानी हटी, दुर्घटना घटी !

1.0 INTRODUCTION

Personal safety involves taking precautions to protect oneself from harm and threats, both in public and private spaces. This includes being aware of surroundings, avoiding potentially dangerous situations, and knowing basic self-defense techniques. For track maintainers in railways context, Personal safety can be understood as taking precautions to protect oneself from harms in worksites near or on the track from track components such as rails, sleepers, pandrol clips, etc. and from the trains running on the tracks. These precautions may be taken either for individual safety by each track maintainers or for the safety of entire gang of track-maintainers working on or near track. Precautions for individual safety are important; however precautions taken for safety of the whole gang working on worksites is of paramount important.

Hand signals and detonating signals are basic tools for ensuring safety in railways; every railway man must be well aware of the working of them. Further protection of line during working on the track is very important. The Gang Mate also has to ensure that the safety devices and signals supplied to the gang are in good condition and ready for use and that each person in the gang has the correct knowledge of all these safety devices and signals. Accordingly, first of all the information about the hand signals, detonating signals is provided. In addition to these Information about the protection of line is also provided.

Personal safety as well as safety of train and passangers and safety of co-workers are very important. So it is paramunt important that the track maintainers who induced in the railways have the complete knowledge about the different hand signals, their exhibition and their use. Similarly they should be aware about the use of detonationg signals and rules regarding protecting the lines in any case.

2.0 HAND SIGNALS

All hand signals shall be exhibited by day by showing a flag.

2.1 Exhibition of hand signals *(Ref: Para 3.52 of Indian Railways (Open Lines) General Rules, 1976)*

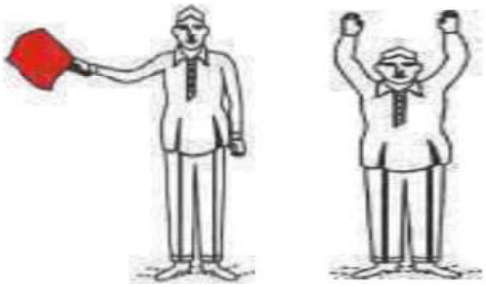
All hand signals shall be exhibited by day by showing a flag or hand and by night by showing a light as prescribed in these rules. During day a flag or flags shall normally

be used as hand signals. Hands shall be used in emergencies only when flags are not available. During night a hand signal shall normally be given by showing a red or green light. A white light waved violently shall be used as a Stop signal only when the red light is not available.

"Red or green light shall be either a static or flashing type".

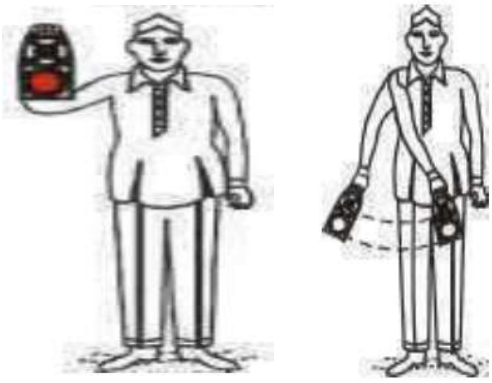
2.2 Stop Hand Signal *(Ref: Para 3.53 of Indian Railways (Open Lines) General Rules, 1976)*

Indication: Stop dead



How given by day:

By showing a red flag or by raising both arms with hands above the head as illustrated in figure.

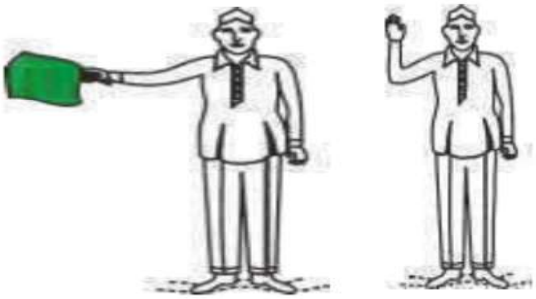


How given by night:

By showing a red light or by violently waving a white light or horizontally across the body of the person showing the signal as illustrated in figure.

2.3 Proceed Hand Signal *(Ref: Para 3.54 of Indian Railways (Open Lines) General Rules, 1976)*

Indication: Proceed



How given by day:

By holding a green flag or by holding one arm steadily as illustrated in figure.

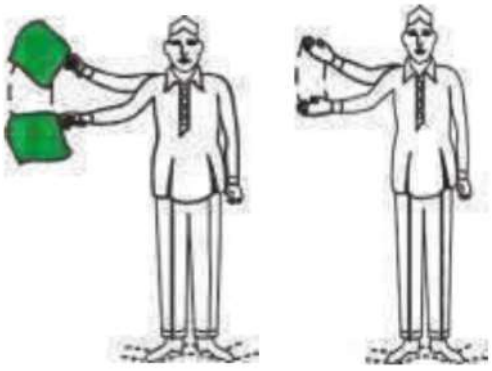


How given by night:

By holding a green light steadily as illustrated in figure.

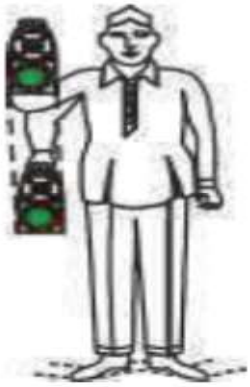
2.4 Proceed with caution Hand Signal: *(Ref: Para 3.55 of Indian Railways (Open Lines) General Rules, 1976)*

Indication: Proceed slowly reducing speed further if the signal is given at a progressively slower rate.



How given by day:

By waving a green flag vertically up and down as illustrated in figure.



How given by night:

By waving a green light vertically up and down as illustrated in figure.

Note: - When the speed is to be reduced further, this signal shall be given at a slower and slower rate and when a stop is desired, the Stop hand signal shall be shown.

2.5 Banner flags *(Ref: Para 3.57 of Indian Railways (Open Lines) General Rules, 1976)*

A banner flag is a temporary fixed danger signal, consisting of a red cloth supported at each end on a post and stretched across the line to which it refers.



2.6 **Knowledge and possession of hand signals** *(Ref: Para 3.58(1) & (3) of Indian Railways (Open Lines) General Rules, 1976)*

Every railway servant connected with the movement of trains, shunting oparations, maintenance of installations and works of any nature affecting safety of trains shall have

a. A correct knowledge of hand signals.
b. The requisite hands signals with him while on duty and keep them in good working order and ready for immediate use.

A red flag and a green flag by day or a lamp, which is capable of showing red, green and white lights by night, shall constitute the requisite equipment for hand signalling.

3.0 DETONATOR SIGNAL *(Ref: Para 816 of IRPWM 2024 & Para 3.59 of Indian Railways (Open Lines) General Rules, 1976)*

3.1 Description of Detonating Signal *(Ref: Para 3.59 of Indian Railways (Open Lines) General Rules, 1976)*

Detonating signals, otherwise known as detonators or fog signals, are appliances which are fixed on the rails and when an engine, a vehicle passes over them, they explode with a loud report so as to attract the attention of the Loco Pilot.

3.2 Use of Detonators *(Ref: Para 816(3) of IRPWM 2024)*

The staff in possession of detonators shall not make any improper use of them. All Engineers are responsible to ensure that the staff working under them know how and when to use detonators.

3.3 Method of using detonators *(Ref: Para 816(3) of IRPWM 2024 & Para 3.60 of Indian Railways (Open Lines) General Rules, 1976)*

A detonator when required to be used shall be placed on the rail with the label or brand facing upwards and shall be fixed to the rail by bending the clasps around the head of the rail.

Detonators should not be placed on the rail joint and sleeper spacing, but put on the rail where there is a sleeper at the bottom.



3.4 Placing of detonators in case of obstruction *(Ref: Para 3.62 of Indian Railways (Open Lines) General Rules, 1976)*

Whenever in consequence of an obstruction of a line, it is necessary for a railway servant to stop approaching trains, he shall proceed, plainly showing his Stop hand signal, to a point 600 metres from the obstruction and place on the line one detonator and then proceed to a point 1200 metres from the obstruction and place on the line three detonators, about 10 metres apart from each other.
If the said railway servant is recalled before the obstruction is removed, he shall leave down three detonators and, on his way back, pick up the intermediate detonator.

3.5 Replacement of Detonators on the line *(Ref: Para 3.63 of Indian Railways (Open Lines) General Rules, 1976)*

Every railway servant placing detonators on the line shall see that they are, when necessary, replaced immediately after a train has passed over them.

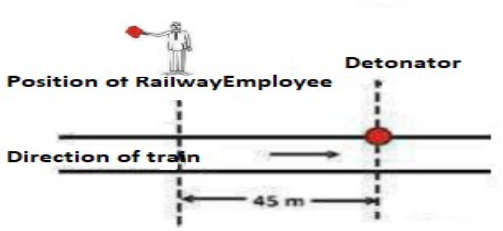
3.6 Life of Detonators *(Ref: Para 816(5) of IRPWM-2024)*

The normal life of detonators is five years.

3.7 Safety range from detonators *(Ref: Para 816(7) of IRPWM-2024)*

No person should be allowed within a radius of 45 metres from the detonators to be exploded; the engine crew shall remain well within the cab. In practice, splinters from detonators when exploded seldom fly in a direction to the rear of the wheel, which detonates them. Staff should therefore, when observing the safety radius, place themselves, as far as possible on the rear side.

When a railway servant has placed one or more detonators on the line, he must withdraw beyond the safety radius of **45 meter** from the detonator or detonators before they are exploded by an approaching engine or train.



4.0 PRECAUTION DURING WORK ON RUNNING LINES

Compared to road vehicles, the stopping distance for trains at the same speed is much greater, and often the train speed is much faster than road vehicles. Unlike road vehicles, trains cannot move out of the way of obstructions.

Trains cannot be relied upon to stop for railway workers. Therefore it is the duty of the track worker to remain in a safe position or move when a train approaches. A safe position is a place where it is safe to stand when a train passes.

4.1 Safety First

1) Personal safety must be ensured i.e. safety of the employees as well as oneself.
2) The workplace should be secured in such a manner that even in case of negligence/overshooting there is no injury to the workers/property.
3) Everyone who works with us plays an important role in making our place a safe place to work. We expect people to take personal responsibility in three areas:

    a) Obey safety rules and regulations relating to their work;
    b) Intervening to prevent unsafe conditions;
    c) Respect for fellow employees and the communities in which we work.

4.2 Duty for Securing Safety *(Ref: Para 2.11(1) of Indian Railways (Open Lines) General Rules, 1976)*

Every railway servant—

1) See that every exertion is made for ensuring the safety of the public,
2) Promptly report to his superior any occurrence affecting the safe or proper working of the railway which may come to his notice, and
3) Render on demand all possible assistance in the case of an aceident or obstruction.

4.3 Personal protective equipment

Personal protective equipment is extremely important when it comes to keeping workers safe. PPE can reduce the risk of injury and in many cases lessen the impact of any accidents that do occur. PPE allows work to be conducted more efficiently and profitably.

Personal protective equipment is effective. Some workers may be reluctant to use personal protective equipment, find it annoying, or resist using it because they think it will interfere with work or think they won't get hurt if they don't wear it, but it is mandatory. However, the fact is that the use of PPE is a proven way to improve safety in a facility, in addition to keeping employees safe.

Information about some personal protective equipment is given below for guidance only.

4.3.1 Safety Jacket

High-visibility (HV) clothing, a type of personal protective equipment (PPE), is any clothing that has highly reflective properties or a colour that can be easily seen against any background.





4.3.2 Safety Gloves

A glove is a garment that covers the entire hand. Gloves have separate openings or openings for each finger and thumb. Gloves provide comfort and protection to the hands from damage caused by cold or heat, friction, scratches or chemicals and provide protection from what cannot be touched with the bare hand.



4.3.3 Safety Helmet

Helmets (hard hats) are primarily used in workplace environments to protect the head from injury from falling objects, impact with other objects, debris, inclement weather, and electrical shock. The helmet has a suspension inside that spreads the weight of the helmet over the head. It also provides a space of about 30 mm (1.2 in) between the helmet shell and the helmet head, so that if the wearer's head collides with an object, the impact is less likely to be transmitted directly to the skull.





4.3.4 Safety Goggle

Eye protection is extremely important as even a minor accident can cause long-term eye damage or even blindness. Goggles provide a strong layer of protection to the eyes. The worker must use proper eye protection when exposed to eye hazards from molten metal, liquid chemicals, acids or caustic liquids. It is good for preventing objects from flying into the eyes such as dust, stones etc. Their main function while welding is to protect the eyes from the extremely bright light of the torch and molten metal and also from the heat.



4.3.5 Shoes

Footwear plays a vital role in protecting the health of workers. Features such as shock-absorbing tunnel systems, anti-slip soles, linings and integrated toe caps provide protection to the feet. Injuries in the workplace can cause significant disruptions to the flow of work and also cost a facility through workers' compensation and have adverse health consequences.

While PPE may initially seem inconvenient to the way employees work, it eventually becomes customary.



4.4 Other equipments for ensuring Safety

Some other equipment which have an important role in ensuring personal on worksites are discussed briefly as follows –

4.4.1 Roaring Whistle

The lookout staff blows a loud whistle to attract the attention of workers at the work site to avoid possible accidents/ injuries from an approaching train.



While working on tracks, the track maintainer has to stand/walk on the same track or adjacent track, which is generally under normal traffic. Due to the noise of the tools/machines used on the track and the concentration of the workers towards the work, they fail to see and react to an approaching train.

4.4.2 Hooter

A device used to produce a loud sound, especially at work places where the work is noisy, such as when working on track machinery. It is used as a signal to alert workers about the movement of trains on the nearby track.



4.4.3 Remote Control Hooter

Workplace Remote Control Hooter is a wireless based remotely oparated alarm for employees working on tracks.

The hooter has remote control oparation so that a look out man standing about 1200 metres away from the work site/ track machine can oparate the hooter to warn the workers working on/ near the track track machine about an approaching train on the same track or nearby tracks.



4.5 Engineering works on running lines *(Ref: Para 805 of IRPWM -2024)*

Engineering works can be broadly divided into three categories –

Category 1: Works of routine maintenance, requiring no speed restriction, not necessitating exhibition of hand signals and involving no danger to trains or traffic. These include works of routine maintenance such as through packing, picking up slacks and overhauling of track etc.

Category 2: Works of short duration

a) Works such as casual renewals of rails and sleepers, adjustment of creep and lubrication of rail joints which are completed by sunset of the day of

commencement and no restriction of speed thereafter is required, are termed "works of short duration".

b) Hand-signal and banner flags and fog-signals shall be used at specified distances to protect the trains.

Category 3: Works of Long Duration

a) Works such as relaying and deep screening of track, bridge construction, diversions which extend over a few days or weeks during which period a continuous restriction of speed is to be in force, are termed as "works of long duration".

b) Temporary engineering fixed signals shall be used at specified distances to protect the trains. These works should be carried out to a programme, about which all concerned will be advised in advance.

4.5.1 Precaution during works of routine maintenance

One should take following precautions while working for ensuring personal safety and the safety of the fellow workers-

1) Always wear prescribed uniform along with all protective equipments.
2) Secure worksite before start of work.
3) While on duty, no railway servant shall, be in a state of intoxication or in a state in which, by reason of is having taken or used any alcoholic drink, sedative, narcotic or stimulant drug or preparation, his capacity to perform his duties is impaired. *(Ref: Para 2.09 of Indian Railways (Open Lines) General Rules, 1976)*
4) No railway servant, directly connected with the working of trains, shall take or use any alcoholic drink, sedative, narcotic or stimulant drug or preparation within eight hours before the commencement of his duty or take or use any such drink, drug or preparation when on duty*. (Ref: Para 2.09 of Indian Railways (Open Lines) General Rules, 1976*
5) One should be conversant with the rules relating to his duties.
6) One should promptly observe and obeys all rules and instructions*. (Ref: Para 2.06 of Indian Railways (Open Lines) General Rules, 1976*
7) One should not use mobile phone while working on line.
8) One should not use ear phone while working on line.
9) Always be vigilant for movement of trains and also direction of trains.
10) Always wear shoes when you are on the track.
11) While inspecting or working, always keep your sight in the opposite direction of traffic.
12) When a train is approaching, get off the track on the cess side.
13) Never stand in the middle of the track.
14) When a train is visible at a sufficient distance, move away from the track.
15) Track maintainers must remove their tools clear of the track on the approach of a train and should not leave any tool unprotected during the course of working or during mid-day-break.

16) When working at a place from which an approaching train can not be seen, at least 600 m away, a gang man with hand signals should be sent out by the Mate*. (Ref: para 114(6) of IRPWM 2024)*

i) On double line in the direction of approaching trains.
ii) On single line in the direction the view is obstructed (in both the direction if view is obstructed on both sides).

It shall be duty of such flagman to warn the mate by means of signals when train is approaching. The mate will be responsible for warning the gang in time to enable them to get clear off the track. Portable whistle board can also be issued to mate. These should be fixed at least at a distance of 600 m from work spot in the direction of in which view is obstructed.

Further following additional precautions for safety may also be taken –

1. In case of double line section when a train is approaching railway men working on track should clear off the track on cess side. This should be followed for all the trains passing through work spot irrespective of the line on which train is approaching. Work should resume only after passage of the train or when it is considered safe. *(Ref: PCE/SWR circular No. 03/2009 "safety of staff working on track" dated 12.11.09)*
2. In case of double line section, at the time of working of track machine,all the staff should be careful and should not stand on other line(Other than the one on which machine is working) *.(Ref: PCE circular No. 03/2009 letter no. SWR/W/PCe circular dated 12.11.09 "safety of staff working on track")*

4.5.2 Precaution during works of Short duration: *(Ref: Para 806 of IRPWM -2024)*

In addition to personal safety precaution to be taken during routine maintenance, following protection of line should be taken.

4.5.2.1 Protection in block section and procedure for passing of trains:

Before commencing any work of such category the JE/SSE/P.Way or authorised Railway servant should issue a notice to the Station Master/Block-hut in-charge at each end of the Block section and obtain their acknowledgment. Depending as to whether the train is to be passed through the work site after stopping or at a restricted speed, the line should be protected in the following manner.

4.5.2.1.1 When the train is required to stop at the site of work (in Block section) –

- Post a flagman with hand signals at a distance of 30 metres in rear of the place of obstruction, to show stop hand signals.
- Post a flagman with hand signals and place a banner flag across the track at a distance of 600 metres in rear of the work. The flagman will show stop hand signals.

- Post a flagman with hand signals and detonators at a distance of 1200 metres in rear of the work. The flagman shall fix three detonators on the line 10 metres apart and stand at a place not less than 45 metres from the three detonators, from where he can obtain a clear view of the approaching train.He will show stop hand signals.

The man at the site of obstruction shall give proceed hand signal to indicate to the Driver, when he may resume normal speed after the train has been hand signalled past the obstruction *(figure-1).*

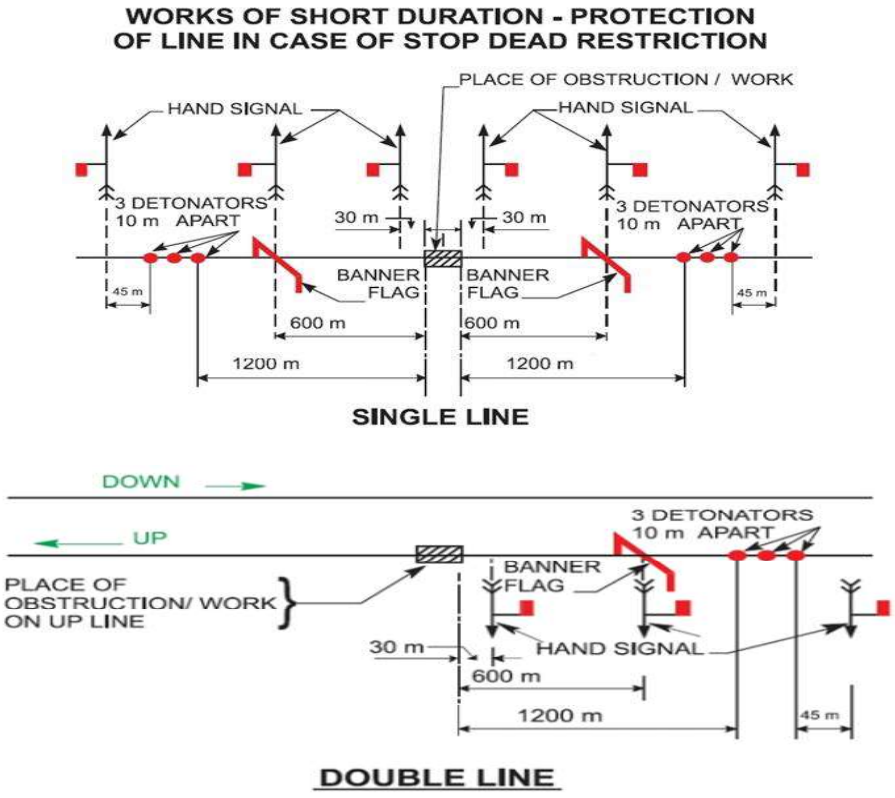


Figure-1
(Ref: Annexure - 8/1 of IRPWM 2024)

4.5.2.1.2 When the train can pass over the work spot at restricted speed in block section –

The following protections should be adopted in the above cases –

- Post a flagman exhibiting caution hand signals at a distance of 30 metres from the place of obstruction.
- Post a flagman exhibiting caution hand signals at a distance of 1200 metres for Broad Gauge from the place of obstruction.

- Post an intermediate flagman with hand signals at a distance of 600 metres for Broad Gauge from the place of obstruction. He will also place a banner flag across the track.
- The intermediate banner flag must be kept across the line until the speed of the train has been reduced, after which the banner flag shall be removed and the train hand signalled forward.
- The railway servant at the site of work should give proceed hand signals to indicate to the Driver, that he may resume normal speed after the train has been hand signalled past the site of work.*(figure-2)*

WORKS OF SHORT DURATION -
PROTECTION OF LINE IN CASE OF REDUCED SPEED

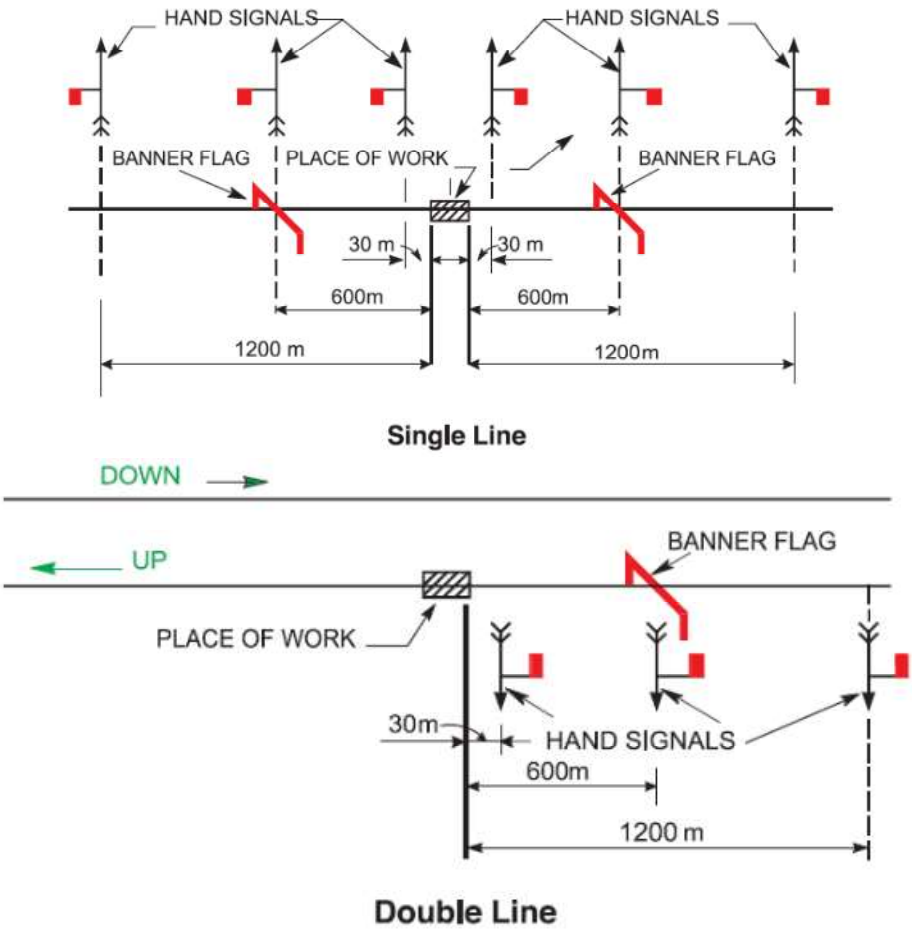


Figure-2
(Ref: Annexure - 8/2 of IRPWM 2024)

The following points should be kept in view, while protecting the track in the cases mentioned in Para 4.5.2.1.1 and 4.5.2.1.2 above:

- On single line, the line must be so protected on both sides of the work.

- At places where there are curves or falling gradients and at times of poor visibility the distances laid down in para 4.5.2.1.1 and 4.5.2.1.2 above may be suitably increased wherever necessary and intermediate flagman posted to relay hand signals.
- The location of the banner flag, detonators and hand signals should be so selected as to avoid stopping of trains, as far as possible, on continuous steep rising gradients.
- If in an emergency, it becomes necessary to carry out such works at night, the provisions for protection of line as detailed in para 4.5.2.1.1 and 4.5.2.1.2 above must be complied with except that red light must be exhibited in the direction of approaching trains in place of red hand signalling flags and banner flags.

4.5.2.2 Works to be carried out in station limits

- No work should be commenced on running line at a station without the written permission of the Station Master and until the relevant signals have been placed at 'ON'.
- Before commencing a work on a line which can be isolated from the other running lines, the JE/SSE/P.Way should ensure that the line has been isolated and retain the keys of locking device in his possession. Where isolation is effected by the setting of points, they must be locked by means of clamps or bolts and cotters.
- Before commencing work on a line which cannot be isolated from other running lines as provided for above, the JE/SSE/P.Way should provide the prescribed hand signals, detonators and banner flags as detailed in para 4.5.2.1.1 and 4.5.2.1.2 above.

4.5.2.3 Works in Automatic Territory *(Ref: Para 15.09 (3) (a) of Indian Railways (Open Lines) General Rules, 1976)*

- In automatic territory, if the distance from the place of works/obstruction to the automatic signal controlling entry of a train into the signalling section is less than 1200 metres and the automatic signal is secured at 'ON' the banner flag and three detonators may be provided at 90 and 180 metres respectively.

4.5.3 Precaution During Works of Long Duration *(Ref: Para 807 of IRPWM - 2024)*

In addition to personal safety precaution to be taken during routine maintenance, following protection of line should be taken. Only relevent details from referenced para of IRPWM have been given.

4.5.3.1 Protection of line in block section

4.5.3.1.1 In case where stop dead restriction is to be imposed when restriction is to last for more than a day, the following temporary engineering indicators should be exhibited at the appropriate distance.

a) Caution indicator
b) Stop indicator.
c) Termination indicators.

4.5.3.1.2 In case where the train is not required to stop (non-stop restriction) and the restriction is likely to last for more than a day, the following temporary Engineering indicators should be exhibited at the appropriate distances.

a) Caution indicator.
b) Speed indicator.
c) Termination indicators.

4.5.3.2 Protection of line in station ***limits*** *(Ref: Para 15.09(2) of Indian Railway General Rules 1976*

Protection of the line as prescribed for block section may be dispensed with if the affected line has been isolated by setting and securing of points or by securing at "ON" the necessary manually controlled signal or signals and approach signal shall not be taken 'OFF' for a train unless the train has been brought to a stop at the first stop signal, except in cases where the loco pilot has been issued with caution order at the station in rear, informing him of the obstruction and the details thereof.

5.0 PRECAUTION DURING HANDLING/ TRANSPORTING MATERIALS

Our track maintainers work in challenging roles and in extreme conditions at times. They may be exposed to many different hazards. Whatever they do, they should ensure they can do the job safely before starting.
Handling of rails, sleepers or other heavy objects shall be done using proper tools and approved equipments. No locally devised arrangement shall be used.

5.1 Rail dolly *(Ref: Para 841of IRPWM-2024)*

Generally a rail dolly is used for transporting rail/ sleeper from one place to the other. A rail dolly is a device with two or more wheels, which can be manually oparated on a rail of the track in a balanced state and can carry a rail/sleeper in a suspended state. The suspended material can be dropped and the rail dolly can be removed from the track when required. At least two competent persons will be deployed on each rail dolly.



5.1.1 Safety Precautions in working of rail dolly *(Ref: Para 841(3) of IRPWM-2024)*

a) The railway servant in-charge of rail dolleys must inspect the section in advance particularly in reference to heaping of ballast, girder bridges and any other special features which make it difficult to drop the material and remove the rail dolley in the event of an approaching train.He shall get the ballast heaps cleared and work the dolley(s) only when the visibility is clear for at least 1200 metre and the rails/sleepers can be dropped off safely without affecting the safety of trains and workers both.

b) Rail dolley shall not be worked on sections having gradients steeper than1 in 200.

c) Not more than 6 rail dolleys should be worked in a group in any one block section.

d) Normally, not longer than 3 rail welded panels should be carried by rail dolleys. The rail dolleys must not be worked after sunset and before sunrise and in bad weather when the visibility is poor. Rail dolleys should not be worked in deep cuttings, steep grades, sharp curves and heavily built up areas where the visibility is not clear for 1200 metres. In such locations, the rail dolleys should be worked under block protection.

e) In case, a rail dolley is to carry rails longer than 3 rail panel or it is required to move over x-overs in yard crossing more than one line in deep cuttings and curves then it should work under block protection.

f) Every rail dolley/group of rail dolley when on line shall exhibit a red flag.

g) The rail dolley shall be protected by a flagman at a distance of 1200 metre from the rail dolley, on a double line in the direction from which trains may approach, and by two flagmen one on either direction on single line. The flagmen shall also carry three detonators for use in any emergency.

h) Where necessary intermediate Flagman should be posted to relay signals.

i) When a train is sighted, the Flagman should wave the red flag vigorously to warn the official-in-charge of the dolley of the train and at the same time place three detonators 10 m apart on the line to protect the rail dolley(s). The detonators should be removed only on receipt of hand signals from the official in-charge by waving of a green signal to withdraw the danger signals from indicating that rail dolleys have been removed.

j) The official-in-charge of the rail dolley shall keep a look out for approaching trains and will get the rail dolley(s) and materials cleared off the track as soon as an approaching train is sighted.

k) While approaching level crossings, the official in-charge shall look out for road vehicles and ensure safe passage of rail dolleys.

l) The official in-charge shall be fully responsible for the safe working of rail dolleys.

5.2 Safety Precautions in Unloading of rails/Sleepers and Fastening

(Ref: Para 711 of IRPWM-2024)

- Utmost care should be exercised in unloading rails. Ramps made of unserviceable rails should be used for unloading. Short welded panels as well as rail panels for laying welded rails may be unloaded by "end-off-loading" method, wherever possible.
- In case of 10/20 pannel rake while on run/unloading, trackmen/ staff shall not be allowed to stand between bulkhead doors and panels on either side of the formation while rake is on run**.** *(Ref: Engineering standard order No.64 item no.6)*
- Safety of personnel involved in handling of rails is of utmost importance. Following precautions must be ensured for safety of personnel during unloading of rails and related to oparation of End Unloading Roller Rakes as contained in RDSO's Guidelines for Handling and Stacking of Rails (CT-35) *(Ref: Para 4.0 of Guidelines for handling and stacking of rails (CT-35) issued by RDSO)*

    - The staff deputed for unloading of EUR rakes must never travel on BFRs. They shall travel only in tool van/ separate wagon provided in rake composition. No staff shall be allowed on ramper/threader during movement of rake from one station to another station where rake is moving for non-block activity.
    - Trackmen/staff shall not stand between bulkhead doors and panels on either side of the formation while rake is on run.
    - The staff must use protective gloves and clothing to minimize the risk of skin abrasion, lacerations and extremes of temparature.
    - Handling of rails shall be done using proper tools and equipments approved by SSE (P.way) in-charge. No locally made arrangements shall be used.
    - The staff must wear distinctive coloured helmet and clothing for easy identification by crane and other machine oparators to avoid accidents.
    - The staff shall use steel toe-capped protective footwear
    - The staff shall be properly trained and cautioned to avoid standing under suspended loads, sudden dropping and impact of rails.
    - Safe working in the vicinity of electrical conductors and cables shall be ensured.
    - The rails should never be carried by staff on the head or shoulder.

5.3 Following safety precautions may be taken for working of material train

(Ref: para 845 of IRPWM 2024)

- Except with the permission of the ADEN or Divisional Engineer, a material train should not be permitted to work during periods of poor visibility due to fog, storm or any other cause.
- Except in an emergency such as, an accident or breach of the railway line, working of Material trains carrying labour should not be permitted between

sunset and sunrise. If due to certain circumstances it is necessary to work Material Trains during night, permission to do so should be obtained from the Divisional Operating Manager.

5.3.1 Warning to Workers on Material Trains (Ref: Para 860 of IRPWM-2024)

- The Guard of a material train shall, before giving the signal to start, see that all the workers are on the train, and warn them to sit down.
- Before moving his trains, the Driver must sound the whistle, according to the prescribed code, as a warning to the labourers that the train is about to move.
- Before commencing any shunting with his train, the Guard must ensure personally that all labourers have been de-trained.
- In the event of it being necessary to part a Material train, the Guard must ensure personally that all labourers have been detrained before doing so.

5.4 Following safety precautions may be taken during working of ballast train *(Ref: RB letter no 2023/CE-II/ Safety/Instruction dated 19.12.2024)*

- Unloading should be done during daylight hours from sunrise to sunset.

- SWR has the following provision for working of ballast train during night. *(Ref: PCE/SWR circular No.02/2022 dated 11.02.2022)*

  If in case the ballast train working is required during night, following precautions/ arrangements to be ensured.

  a) Personal permission of DRM is obtained in advance.
  b) Proper lighting arrangement should be done at the work spot.

- The staff deputed for unloading the ballast should carry requisite tools like shovel, ballast forks or rakes, mortar pans or baskets etc.

6.0 SAFETY PRECAUTION DURING WORKING OF TRACK MACHINE

The oparation of some track machines can endanger the safety of humans and materials if adequate precautions are not taken at the job site. For example, BCM has the potential to create a dusty atmosphere which may impair visibility around the machine and also cause a lot of noise. TLE and TRT involve a large number of workers working with the machine. Therefore, extra care is necessary to ensure the safety of workers.

Safety of self and others is one of the most important aspect in operation and maintenance of machine. Instructions of machine in-charge should be followed under any circumstances. Each unit shall carry all safety equipment as specified under IRTMM.

The following safety aspects / precautions should be observed while working near/with track machines:

- No person should climbs on any machine without OHE block in electrified sections.
- It should be ensured that all precautionary measures are taken for the safety of the employees while working on double/multiple line block section so that there is no danger to running of trains on adjacent lines. SSE/JE (P.Way) is required to post lookout man at the site of working machine as per the requirements including safety.
- Depending upon the site condition and visibility, caution order of appropriate speed with instruction to blow whistle freely on adjacent line should be imposed during the block period for the safety of workmen.
- Climbing on machine parts located in the hazardous area of the overhead line during loading, unloading and repair works is prohibited until the overhead line is turned off.
- It is strictly prohibited to pass under the machine during machine oparation or working.
- Always keep your eyes open for other people working near the machine.
- Don't forget to look for signals, switches and track obstructions.
- It is prohibited to make a fire on or near the machine.
- Always wear proper clothing, safety shoes and helmet when oparating the machine.
- Use of mobile phones by individuals should be strictly prohibited during oparation or working of track machines.
- Hooters should be provided on the track machines. These hooters should be used to warn the staff working on/around the track machine about approaching train on adjoining track. Remote controlled hooters shall also be deployed as an added precaution by SSE/JE/P.Way so that lookout men standing around 150 m away from the track machine can also oparate the hooter to warn the staff suitably. SSE/JE/TM shall also put on the flasher light on as an added precaution till the train on adjacent line has passed the site of work. *(Ref: Para 707(7)(b) of IRTMM-2019)*
- Caution order of 30 to 50 kmph with instructions to whistle freely should be imposed on the adjacent line, during the duration of block, for the safety of workmen, depending upon the site conditions and visibility. *(Ref: Para707(7) (c) of IRTMM-2019)*
- In case of double line section, at the time of working of track machine,all the staff should be careful and should not stand on other line (Other than the one on which machine is working). *(Ref: PCE/SWR circular No. 03/2009 dated 12.11.09 on "safety of staff working on track")*

6.1 Personal safety precautions during working of different Track Machines

6.1.1 During traffic block for BCM

- Protection of worksite and safety of staff working in the vicinity of machine shall be ensured. Hooter shall be available at site in addition to that provided

on the machines to forewarn staff about approaching train on adjacent lines. *(Ref: Para 306(3)(b) of IRTMM-2019)*

- Utmost caution should be observed while controlling movement of waste conveyor to avoid hitting against electrical mast/signal post. Safety switch provided to sense the mast should, therefore, be kept 'ON' (in working condition). *(Ref: Para 306(3)(k) of IRTMM-2019)*
- All the staff working with the machine must wear safety helmets, proper shoes and masks to avoid inhaling dust. *(Ref: Para 306(3)(l) of IRTMM-2019)*

6.1.2 During block for TLE

- Protection of track and safety of staff working in block should be ensured. *(Ref: Para 409(2) of IRTMM-2019)*

6.1.3 During the Block of TRT

- Always take OHE block, as staff may be required to climb on top of the machine for repairs etc. in case of any break down. *(Ref: Para 415(2) of IRTMM-2019)*
- Ensure proper track protection at the site of work, look-out men and hooter in good working order to give warning for train approaching on the other line. *(Ref: Para 415(3) of IRTMM-2019)*
- Impose speed restriction on the adjacent line of not more than 50 kmph to ensure safety of men.*(Ref: Para 415(5) of IRTMM-2019)*
- Do not stand close to the machine or modified BFRs and do not touch the gantry rails.orking at site. *(Ref: Para 417(4) of IRTMM-2019)*
- Do not stand on the BFR while the gantry is moving over with new/old sleepers. *(Ref: Para 417 (5) of IRTMM-2019)*
- Without work, do not sit on the rail seat meant for liner/rubber pad placement. *(Ref: Para 417(7) of IRTMM-2019)*
- Do not climb to the top of TRT without OHE block in electrified section. *(Ref: Para 417 (8) of IRTMM-2019)*

6.1.4 Pre-Block Activity before Deploying RGM

- Counsel the staff and gatemen to keep everyone away from the machine during its working to avoid injury from flying sparks and iron dust. *(Ref: Para 510(3) of IRTMM-2019)*
- Counsel the staff working on track as well as the RGM to use safety gadgets such as helmet, goggles, reflective jackets, shoes etc. during RGM working. (Ref: *Para 510(4) of IRTMM-2019*)
- While filling diesel, ensure that diesel does not spill onto the rubberized spark guards, which may cause fire during grinding. *(Ref: Para 510 (6) of IRTMM-2019)*

6.1.5 Works required Before, During and After Deployment of UTVs and RBMVs

- The staff should not stand below the suspended load for their safety. *(Ref: Para 515(21) of IRTMM-2019)*
- The staff should wear protective gloves and industrial shoes to minimise the risk of injury. *(Ref: Para 515(22) of IRTMM-2019)*
- The staff should wear distinctive colour helmets and clothing for easy identification by crane and machine drivers to avoid accidents. *(Ref: Para 515(24)(b) of IRTMM-2019)*

7.0 PERSONAL SAFETY PRECAUTION DURING WORKING ON SHARP CURVES/ CURVES WITH POOR VISIBILITY, ACCIDENT SPOTS, AND CONGESTED LOCATIONS LIKE BRIDGES, AND TUNNELS.

In addition to the personal safety precautions discussed before, following additional safety precautions for personal safety should be taken where either the proper visibility is obstructed or free movement of staff is restricted-

a) Orange high visibility clothing must be worn. Yellow, green or red clothing is not permitted as these are the colours of signal flags.

b) Where visibility is poor a lookout man is posted to signal workers of approaching trains.

c) Lookout men equipped with hand signal flags are posted at such places to warn the workers working there of the approaching train. On getting the signal from the lookout man, the workers should move to a safe place (trolley refuge/man refuge on big bridges and in tunnels) and personally satisfy themselves that no equipment and plant is left on the track which could cause collision with the moving train.

Note- Trolley Refuge: Trolley refuges are provided at suitable intervals on bridges, in cuttings, in tunnels and on high banks.



ट्रॉली आश्रय/ Trolley refuse



Refuse in tunnel



Trolley refuse on bridge

i) Precautions when view is obstructed (*Ref:Para 114(6) of IRPWM-2024)*

When working at a place where the approaching train is not visible for at least 600 metres, the track maintainer should be dispatched by the gangmate with hand signals:-

a) On double lines in the direction of approaching trains,
b) On single lines in the direction in which the view is obstructed (on both sides if the view is obstructed in both directions).

It shall be the duty of such flagman to warn the gang mate by means of signals when a train is approaching. Gangmate will be responsible for warning the gang in a reasonable time so that they can move off the track. As an additional precaution, it may be considered advisable to issue portable whistle boards to indicate the gangmates, which they should place at a distance of at least 600 metres from the work site in the direction in which the view is less obstructed than this.

ii) For movement along the bridge side pathways should be used to ensure safety of maintenance staff.Walkway should be used only at the time of inspection and maintenance of track.

Note-

A. Side pathways are provided on girder bridges to ensure safety of maintenance staff.
B. Suitably secured walkways (or inspection gangways) made of chequered plates with holes are provided inside the track to cover the available width between the guard rails and at other suitable locations to ensure the safety of maintenance staff and to facilitate inspection.



पुल पर आश्रय एवं पाथवे- / Refuse and Path-way on bridge

i) At the accident site, heavy crane may be working or OHE wire may have been fallen, etc. hence always wear safety equipment and be cautious.
ii) Movement of tower wagon, engine, material train is possible from any direction at the acident site, hence remain alert for the safety of yourself, others and property and equipment.

8.0 PERSONAL SAFETY PRECAUTIONS IN TRACK CIRCUITED AREAS *(Ref: Para 662(2) of IRPWM 2024)*

a) Employee should not touch any tool or metal object across two rails in the track, which may cause short circuit.
b) All gauges, levels and trolleys used in the track-circuited length should be insulated.
c) While carrying out track maintenance, various S&T/Electrical installations which interfere with the maintenance activities should be removed by S&T/Electrical department. So that there is no damage to/from track circuit fittings like rail bonding wire, rail lead wire, boot leg, jumper wire etc.
d) Use of steel tape should be avoided in track-circuited sections.
e) Water accumulation should not be allowed in track-circuited sections.

9.0 PERSONAL SAFETY PRECAUTIONS IN ELECTRIFIED AREAS *(Ref: Para 664 of IRPWM 2024)*

All electrical equipment, every electric line or cable shall be treated as 'live' at all times. No work shall be commenced near any electrical equipment except on the authority issued in writing by a competent employee of the Electrical Department to the effect that the equipment has been made dead and earthed.

9.1 Necessity of precautions *(Ref: Para 664(1) of IRPWM 2024)*

Precautions need to be taken because of the following:-

1) Proximity to an active conductor *(Ref: Para 664(1)(a) of IRPWM 2024)*

The risk of direct contact with live OHE always exists when working in electrified sections, such as for painting steel work of bridges and platform covers.



2) Potential difference created due to return current in the rail *(Ref: Para 664(1)(a) of IRPWM 2024)*

The return current in the rail may produce potential differences –

a) Between the surrounding mass of the rail and earth.
b) Between the two ends of a fractured track.
c) Between two rails at an insulated joint.
d) Between earth and any other metallic mass.

9.2 Personal Safety Precautions when working in traction areas *(Ref: Para 664(2) (a, c, d, e) of IRPWM 2024)*

a) No work shall be carried out without 'Permit-to-Work' within two metres of live parts of OHE.

b) In electrified areas, felling of tree trunks shall be done by Engineering Department in presence of authorised TRD staff to ensure safety and satisfactory completion of work.

c) Day to day trimming of tree branches to maintain 4 metres safety clearance from OHE shall be done by authorised TRD staff and supervisors, wherever required.



d) No fallen wire or wires should be touched unless the power has been switched off and the wire or wires have been suitably earthed. If wires fall on a level crossing, the gate-keeper shall immediately arrange for all road traffic to be stopped.



e) Staff working on station roofs and signal gantries and similar structures adjacent to live overhead equipment shall not use any measuring tapes, tools and materials which are likely to be dropped or carried by the wind when on to live overhead equipment.



f) In electrified track steel tapes or metal tapes with woven (metal wires embedded in them) metal reinforcement should not be used. Linen tapes are safer though not as accurate. Hence they should be used.

9.3 Additional precautions in AC traction areas *(Ref: Para 666 of IRPWM -2024)*

a) It is important to note that dangerous voltages may be induced in metallic masses such as fencing posts in the vicinity of traction conductors. To avoid

possibility of shock due to such voltages, the metallic structures are bonded together and earthed.

b) When unloading rails along tracks, care shall be taken to ensure that rails do not touch each other to form a continuous metallic mass of length greater than 300 metres.

c) Permanent way staff are advised to stay away from tracks and avoid contact with rails when a train hauled by an electric engine is within a radius of 250 m.

d) If fire breaks out near any electrified equipment, the permanent way staff shall not make any attempt to extinguish the fire but shall report the fire to the nearest Station Master in the most expeditious manner. *(Ref: Para 667 of IRPWM- 2024)*

e) Safe working around electric conductors and cables shall be ensured.

f) Personally ensure that no equipment or any part of the body falls within the "danger zone" i.e. 2 m of OHE.*(Ref: Part II Appendix 1 Para 3.2 of ACTM Vol.II)*

9.4 Treatment of persons suffering from electric shock *(Ref: Para 670 of IRPWM -2024)*

In most cases, persons suffering from electric shock can be revived immediately with first aid.

Method of resuscitation- Artificial respiration should be used for resuscitation.

Continuation of treatment- Efforts to restore breathing should be continued with persistence on a regular basis. It should not be discontinued until the doctor has taken charge of the case.

10.0 PRECAUTION WHILE WORKING DURING HEAVY RAIN, SAFETY AGAINST SNAKE/ INSECT BITE.

a) During heavy rains the visibility is poor and hence work on track is to be carried out only when absolutely necessary.

b) Always be used all protective gears during work in rainy season. Do not use umbrella in the rain, use only rainkot.

c) During thunderstom and lightning move away from trees, steel structures and tall objects. If possible, take shelter in a solid/strong place.

10.1 Anti-snake measures

a) All holes in the ground in snake infested areas should be filled with soil.

b) Keep the tracks and passages clear of grass and bushes.

c) Do not put any part of the body in areas covered with thick grass or bushes. Before working there, stir the area with something to find out if there are any insects etc.

d) Use steel toe shoes to avoid snakes, if possible.

e) Use insect repellent lotion, if possible.

11.0 PRECAUTIONS DURING NIGHT WORKING.

- Workers must wear retro reflective jackets at night.
- Sufficient Light arrangement should be made on the work site.
- Trollies should be worked under block protection in the night. **(***Ref: Para 837(3)(b)of IRPWM 2024)*
- Night Signal for working of Trolley/ Motor Trolley/ Lorry – On a double line the night signal shall be red light in the direction from which trains are expected and white in the other direction and on a single line, red in both directions. Where on double line, single line working is introduced, the night signal should be as per a single line. When working within the station limits, the light displayed at night shall be red in both directions. **(***Ref: Para 836(2)of IRPWM 2024)*

12.0 SAFETY DURING WORKING IN GHAT SECTIONS.

The term "ghat," means a hill, hill range, route through hills, or a pass. For example- Kangra Valley, Kalka-Simla in Northern Railway, Thal Ghat, Bhore Ghat in Central Railway, etc. Since ghat section has steep slopes and frequent curves, it adversely affects clear visibility at work site. Further, there are large number of bridges and tunnels on ghat sections.

1. On the sections of restricted visibility, push trolley/ motor trolley should be worked under block protection. **(***Ref: Para 837& 838 of IRPWM 2024)*
2. One must be extra cautious and watchful as there is a danger of heavy slips with boulders and mud on hilly areas especially during monsoon and post mansoon periods.
3. Take care of the slope so that it does not cause slipping.
4. If you are working in the Ghat section, keep a close eye on the opposite side of the work site, so that if a vehicle splits and comes back, you remain safe.
5. Signals within long tunnels – On sections where there are long and dark tunnels, the night signals prescribed must be displayed during the day in addition to the red flag, in the case of trollies, motor trollies and lorries. In the case of thick foggy or tempestuous weather impairing visibility, light signals must be displayed in addition to the red flag(**(***Ref: Para 836(3)of IRPWM 2024)*

13.0 PERSONAL SAFETY -- DOS & DON'TS

- All employees of the civil engineering department should have knowledge of personal safety.
- Wear helmets, gloves, protective clothing prescribed for different tasks.
- Always wear shoes when you are on the track.
- Always choose to walk opposite to the traffic.

- Always prefer to make your sight during inspection or working against direction of traffic.
- When a train is approaching, get off the track on the cess side.
- Cess should be used, so keep the cess clean of weeds and jungle.
- Never ever stand in the middle of the track.
- When a train is visible at a sufficient distance, move away from the track.
- Do not stand in the middle of a girder bridge when a train is passing on the adjacent track.
- While working or walking on girder bridges, extra caution must be taken to avoid falling from trains and into rivers.
- In major yards it is difficult to guess on which line the train is coming. Hence one must be very cautious.
- Be cautious and take all the precautions while working near by blasting areas.
- Do not board or get dowm from a running train.
- Do not use cell phone oparation when you are on the track.
- While working on machine block or any other work restrict yourself to walking on the block line only.
- It is very common to wrap or cover the ears to protect from heat or cold. This is not permitted due to possible hearing loss.
- All work-site must have first aid box fully equipped and ready to serve.
- While working in the yard do not try to pass under wagons or stationary vehicles to cross the track.
- While working in the yard do not try to jump over the buffers of a stationary train to cross the track.
- While working on double/multiple lines never be distracted by any passing train or any object of interest, since many number of staff have lost life by absent mindedly watching the passing train and got run over by approaching train.
- On double/multiple lines expect train to come in wrong direction at full speed as one will never know when single line working is introduced.
- No work shall be done within 2 meter distance from live conductor without permission of OHE staff.
- Do not use steel/metallic tapes, ranging rods, staff and tripod stands of levelling instrument etc. on electrified track.
- Do not touch rails with bare hands in OHE area, use gloves.
- Return current in rails may produce potential difference between two ends of fractured rail, hence provide temporary connection there.
- Do not come in contact with the rails when the train is within 250 meters of the electric engine.

- In case of wire breakage, protect the track and stop the train immediately.
- Do not touch fallen or hanging wires.
- Do not stand under cylindrical weights hung with wires on OHE (equipment) poles.



- Before removing or loosening the fish-plates, temporarily connect both the rail ends with jumpers to ensure constant current flow in the rails



- Do not disturb the rail bonding or bonding provided to the structures. If any bonding breaks, immediately inform OHE staff.
- Do not use the track for sitting or other such purposes.
- Staff must wear retro reflective jackets during night hours.
- It is better to depend on your ears and eyes apart from taking train position on phone/walkie talkie.
- No person should stand at a distance of less than the prescribed distance of 45 meters from the detonator.
- Safety equipment like walkie talkie, hooter, thunder whistle, detonator, torch, flashing light, H.S. flag, banner flag etc. are to be widely used in the work.
- During thunderstorm and lightning, move away from trees, steel structures, tall objects etc.
- Be familiar with safety rules and stay updated.
- Strictly follow the instructions and procedures mentioned in various manuals for safety.
- Utilize intermediate flagmen to alert the workmen if required in case of working in sharp curved tracks or in cuttings.
- Provide “W” boards in sharp curves and cuttings where visibility is poor.

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Annexure-1

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)

अमित
3/1/25

(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.*

REFERENCES

SN.	Description
1.	Indian Railways Permanent Way manual (IRPWM)-2024
2.	Indian Railways (Open Lines) General Rules, 1976
3.	Indian Railway Track Machine Manual-2019
4.	*RB letter no 2023/CE-II/ Safety/Instruction dated 19.12.2024*
5.	*Guidelines for handling and stacking of rails (CT-35) issued by RDSO*
6.	*PCE/SWR circular No. 03/2009 "safety of staff working on track" dated 12.11.09*
7.	*PCE/SWR circular No.02/2022 dated 11.02.2022*
8.	Literature available on IRICEN website
9.	Litrature from MSTC, Gorakhpur (NE Railway) letter No.M/E-210/trainees/563/TS/Part- I dated 10.06.2025

NOTES

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CAMTECH is continuing its efforts in the documentation and up-gradation of information on maintenance practices of civil engineering assets. Over the years a large number of publications on civil engineering have been prepared in the form of handbooks, pockets books, pamphlets and video films, etc. These publications have been uploaded on the internet as well as rail net.

Link for downloading CAMTECH publications:

On internet visit: https://indianrailways.gov.in/

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Disclaimer

The contents of this handbook are for guidance only & are not statutory. It also does not supersede any instructions from Railway Board, RDSO, and Zonal Railways & the provisions of IRWM, BIS Codes/Reports on the subject.

If at any point contradiction is observed, then Indian Standards, regulations issued by Government bodies, Railway Board/RDSO guidelines shall be referred.

हमारा उद्देश्य

अनुरक्षण प्रौद्योगिकी और कार्यप्रणाली को उन्नयन करना तथा उत्पादकता और रेल्वे की परिसंपत्ति एवं जनशक्ति के निष्पादन में सुधार करना जिससे अन्तर्विषयों में विश्वसनीयता, उपयोगिता और दक्षता प्राप्त की जा सके।

यदि आप इस संदर्भ में कोई विचार और सुझाव देना चाहते हों तो कृपया हमें इस पते पर लिखें।

संपर्क सूत्र :निदेशक / सिविल

पत्राचार का पता : भारतीय रेल उच्च अनुरक्षण प्रौद्योगिकी केन्द्र
महाराजपुर, ग्वालियर (म. प्र.) पिनकोड - 474005

टेलीफोन : 0751-2470869

फैक्स : 0751-2470841

ई-मेल :dircivilcamtech@gmail.com

Our Objective

To upgrade Maintenance Technologies and Methodologies and achieve improvement in productivity and performance of all Railway assets and manpower which inter-alia would cover Reliability, Availability, and Utilisation.

If you have any suggestion & comments, please write to us:

Contact person : **Director (Civil)**

Postal Address : **Indian Railway Centre for Advanced Maintenance Technology, Maharajpur, Gwalior (M.P.)**
Pin code – 474 005

Phone : **(0751) - 2470869**

Fax : **(0751) – 2470841**

Email : dircivilcamtech@gmail.com