केवल कार्यालय उपयोग हेतु
For Official Use Only

भारत सरकार – GOVERNMENT OF INDIA

रेल मंत्रालय – MINISTRY OF RAILWAYS

फाटकवाले के कर्तव्य

DUTIES OF GATEMAN

कैमटेक/**2022/**सि/फाटकवाला/**1.0**

CAMTECH/2022/C/Gateman/1.0

सितम्बर – 2022/ **September – 2022**



Excellence In Maintenance

भारतीय रेल उच्च अनुरक्षण प्रौद्योगिकी केंद्र, महाराजपुर, ग्वालियर - 474005

Indian Railways Centre for Advanced Maintenance Technology
Maharajpur, Gwalior - 474005

Blank Page

फाटकवाले के कर्तव्य

DUTIES OF GATEMAN

Blank Page

Foreword

Most of the routes of Indian Railways are quite busy and on other side road traffic on L-Xing is also in ever increasing trend. Gateman has to pass road traffic safely in between passage of trains by following working rules. Safety on L-Xing is very important part of working of Gateman.

This handbook is prepared by CAMTECH to disseminate the knowledge of prevailing safety rules, working instructions for different types of Engineering Level Crossings Gates & Duties of Gateman on Indian Railways.

I hope that this handbook will be of significant help to Civil Engineering personnel involved in above work in Railways.

CAMTECH/Gwalior **Jitendra Singh**

DATE: 30.09.2022 **Principal Executive Director**

Preface

The working of Gateman is very important aspect in terms of safety on L-Xing. To upkeep the knowledge of Gateman it is necessary that the information available on different platform is to be produced in concise form.

Almost all the relevant provisions available in various codes, Manuals, etc and instructions issued by Railway Board have been taken in to account while preparing this handbook.

This handbook is prepared with the objective to instruct and drill the gateman for their duties who are engaged to perform the duties on Engineering Gates in Indian railways. This handbook does not supersede any existing instructions from Railway Board, RDSO & Zonal Railways and the provisions of IRPWM. For more in-depth information, the relevant manual and instructions on the subject may be referred.

Since this handbook provide direct access to all the relevant information regarding duty of Gateman in a compiled form, it is expected that it will be of immense use to the personnel engaged as Gatemen on Engineering gates and thereby helping them in performing more effectively and efficiently.

I am grateful for the assistance given by Shri S.S. Pathak, SSE (P.Way), CAMTECH, who was involved in collecting data, data entry, going through the complete text/graphics, text editing work, etc.

We welcome any suggestions from readers for further improvement.

CAMTECH/Gwalior ***Deepak Mehra***
DATE: 30.09.2022 ***Joint Director/Civil***

ISSUE OF CORRECTION SLIPS

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

CAMTECH/2022/C/Gateman /1.0/CS. # XX date.....

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

CORRECTION SLIPS ISSUED

Sr. No. of C. Slip	Date of issue	Page no. and Item No. modified	Remarks

CONTENTS

S. No.	Description	P. No.
	Foreword	*i*
	Preface	*ii*
	Correction Slip	*iii*
	Content	*iv-v*
1	General	1
2	Knowledge of Rules and Signals	1
2.1	Hand Signals Rules	1
2.1.1	Knowledge and possession of hand signals	1
2.1.2	Exhibition of hand signals	2
2.1.3	Stop hand Signal	2
2.1.4	Proceed hand signal	3
2.1.5	Proceed with caution hand signal	4
2.2	Detonating Signals Rules	5
2.2.1	Description of detonating signals	5
2.2.2	Storage of Detonators	5
2.2.3	Use of Detonators	5
3	Duty for securing safety	7
3.3	Action to be taken where sabotage is suspected	8
4	Equipment at Level Crossings	8
4.5	Height Gauges on Electrified Sections	12
4.6	Duty Rosters and Medical Fitness Certificates	13
5	Duties of Gateman	13
5.3	Knowledge of Gate working Instructions	13
5.4	Placing of banner flag across the track	13
5.5	Upkeep of safety equipment and gears	14

5.6	Channel for flange of wheels	14
5.7	Transfer of charge of gate	14
5.8	Alertness	14
5.9	Gateman Position & to observe passing trains	15
5.10	Action in case of unusual occurrence on train	15
5.11	Defects at level crossing	16
5.12	Action in Emergency	17
5.13	Trespassing	19
6	Working Instructions for Engineering Level Crossing Gate	19
6.1	Mode of Operation	19
6.2	Special Instructions for Different Types of Level Crossings	20
6.2.1	Interlocked with Gate Signals, Provided with Telephone, with Normal Position 'Open to Road Traffic'.	20
6.2.2	Non-Interlocked, Provided with Telephone, with Normal Position "Open to Road Traffic"	28
6.2.3	Non-Interlocked, Provided with Telephone, with Normal Position "Closed to Road Traffic"	34
6.2.4	Non-Interlocked, Not Provided with Telephones, with Normal Position "Closed to Road Traffic"	39
	References	44
	Notes	45

1 General

"Gateman" means a competent railway servant posted at a level crossing for working the gates.

Every Gateman shall be fully conversant with the use of hand signals, detonators and protection rules.

General Requirement for every Railway Servant

2 Knowledge of Rules and Signals

Every Railway servant shall have the correct knowledge of following rules:

2.1 Hand Signals Rules

2.1.1 Knowledge and possession of hand signals

(a) Every railway servant connected with the movement of trains, shunting operations, maintenance of installations and works of any nature affecting safety of trains shall have:

i. Correct knowledge of hand signals.

ii. The requisite hand signals with him while on duty and keeps them in good working order and ready for immediate use.

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

2.1.2 Exhibition of hand signals

(a) All hand signals shall be exhibited by day by showing a flag and by night by showing a light as prescribed in these rules.

(b) During day a flag or flags shall normally be used as hand signals.

(c) 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.

(d) Red or green light shall be either a static or flashing type.

2.1.3 Stop hand Signal

(a) **Indication: Stop dead**

(b) **How given by day:**

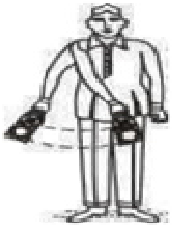
By showing a red flag, as illustrated below: -



(c) **How given by night:**

By showing a red light or by violently waving a white light horizontally across the body of the person showing the signal as illustrated below: -





2.1.4 Proceed hand signal

(a) **Indication:** Proceed

(b) **How given by day:**

By holding a green flag as illustrated below:-



(c) **How given by night:**

By holding a green light steadily as illustrated below: **-**



2.1.5 Proceed with caution hand signal

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

(b) **How given by day:**

By waving a green flag vertically up and down as illustrated below: -



(c) **How given by night:**

By waving a green light vertically up and down as illustrated below: -



2.2 Detonating Signals Rules

2.2.1 Description of detonating signals

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.

2.2.2 Storage of Detonators

(a) Detonators must be carefully handled as they are liable to explode if roughly handled.

(b) Detonators shall be kept in Tin cases specially supplied and they shall be stored in dry places and not left in contact with the brick walls, damp wood, chloride of lime or other disinfectants, nor exposed to dampness or steam or other vapours.

(c) The month and year of manufacture is shown on the label outside each case and is also stamped on each detonator must be used in the order of the dates stamped on them, those of the oldest date being always used first. To facilitate ready withdrawal in this sequence, they should also be stored accordingly.

2.2.3 Use of Detonators

(a) The staff in possession of detonators shall not make any improper use of them.

(b) Life of Detonators: -

The normal life of detonators is five years.

(c) **Method of using detonators**

i. 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.

ii. Detonators should not be placed on rail joint and sleeper spacing, but should be kept on the rail where there is sleeper below.



(d) **Placing of detonators in case of obstruction**

i. 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 three detonators on the line about 10 metres apart from each other.

ii. 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.

(e) **Safety range from detonators**

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.

3 Duty for securing safety

3.1 Every Railway servant shall–

3.1.1 See that every exertion is made for ensuring the safety of the public,

3.1.2 Promptly report to his superior any occurrence affecting the safe or proper working of the railway which may come to his notice, and

3.1.3 Render on demand all possible assistance in the case of an accident or obstruction.

3.2 Every railway servant who observes that–

3.2.1 Any obstruction, failure or threatened failure of any part of the way or works,

3.2.2 Anything wrong with a train, or any unusual circumstances likely to interfere with the safe running of trains, or the safety of the public.

3.2.3 Shall take immediate steps, such as the circumstances of the case may demand to prevent accidents and where necessary, advise the nearest Station Master by the quickest possible means.

3.3 Action to be taken where sabotage is suspected

As soon as he observes any sabotage or likely sabotage, bomb blast explosion etc. to the track, bridges or other fixed installation, immediately he will protect the track and inform to nearest Station Master.

Requirement Specific to Level Crossing

4 Equipments at Level Crossings

4.1 The equipment for a Level Crossing shall be as follows; in addition to such others as may be prescribed by special instructions: –

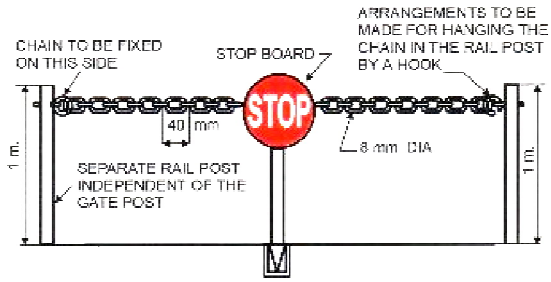
(1) Two hand signal rechargeable LED lamp with tri-colour light /Kerosene oil H S lamp, tri-color provided with bright reflectors.

(2) 1 Hand signal flag- green.

(3) 2 Hand signal flags- red.

(4) 1 Staff suitable for exhibition of red lamp or red flag.

(5) 2 Long spare chains with "STOP" marked disc attachment at the centre to cover the full width of the gate, for use in case the gates/ barriers are damaged.



(6) 2 Spare small chains and padlocks for locking gates, in case locking arrangements of gates become defective.


Chain

(7) 10 nos. Detonators in tin case.

(8) 1 Tin case for flags.

(9) 2 nos. Banner flags.

(10) 1 Canister for muster sheet. (For Engineering gates only)

(11) 1 Can for oil. (Only at gates where Kerosene oil hand lamps are still in use)

(12) 1 Tommy bar.

(13) 1 Water pot or bucket.

(14) 1 Mortar pan.

(15) 1 Powrah.

(16) 1 Rammer.

(17) 1 Pick-axe.

(18) 1 Tool list (with columns drawn for checking of tools).

(19) 1 Book of safety rules in regional language and English (This is already part of gate working instructions)

(20) Duty roster.

(21) Complaint book for road users.

(22) Inspections register.

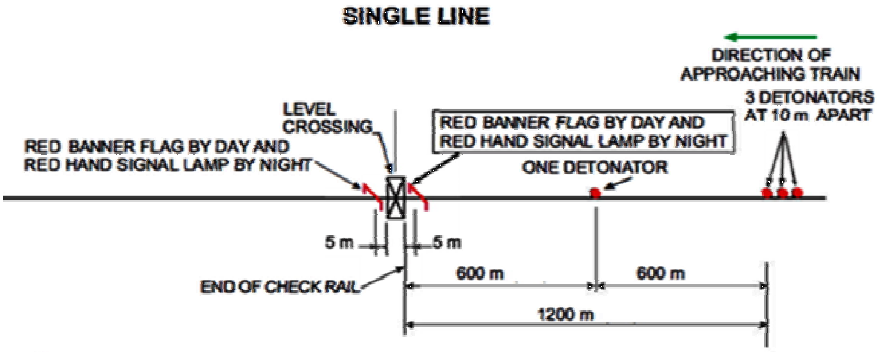
(23) Level crossing working instructions containing safety rules.

(24) Two gate lamps (Electric/ Kerosene type).

(25) Gatemen working on double line/multiple lines, ghat sections, suburban and automatic block territories shall be provided with three warning signals. Gatemen working on single line sections shall be supplied with two warning signals. Gates provided with rechargeable lamps with flashing red light, will serve the above purpose.

(The signals to be used to warn the incoming train of an obstruction shall be red flashing hand signal lamp at night or red flag during day as per Para 3.65 of G&SR). Gatemen working on single line sections shall be supplied with two warning signals.

(26) Diagram indicating the method of protection to be adopted, in case of obstruction in the level crossing.



(27) Wall clock to enable the gateman to correctly record the time of exchange of private number, expected and actual time of passage of train, time for opening and closing of level crossing, etc.

(28) Whistle thundered – 1 No.

Note – In case of Level Crossings in multiple lines the hand signal flags/lamps, detonators and banner flags shall be increased suitably.

4.2 In place of physical private number books, it is preferable to provide automatic Private Number generating device, which generates Private Number only after closure of Level Crossing gates and thus enhances safety.

4.3 There should be sufficient supply of kerosene oil, wicks and matches at the gate-lodge provided with HS lamps/ gate lamps. The Gateman should always keep their hand signal

lamps trimmed and ready for lighting and use at a moment's notice. During night, one of the hand signal lamps should be kept lit through-out to show danger stop signal to an approaching train. When the level crossing is closed to road traffic, the hand signal lamps should be kept dimly lit only.

4.4 At every Level Crossing there are distinct indication at 600 meters and 1200 meters on Broad Gauge on either side to guide the Gateman for placing the detonators in case of obstruction at the level crossing. Indicator posts are provided with one dot and three dots at these distances to indicate the number of detonators to be placed. Arrangements are made available at a distance of 5 meters for exhibiting the danger signal to use during emergency at each level crossing.

4.5 Height Gauges on Electrified Sections

4.5.1 Adequate arrangements are made to erect standard height gauges on either side of the overhead equipment or other equipment at every level crossing so as to ensure that all vehicles and moving structures passing under the height gauge also pass under the overhead equipment or other equipment with adequate clearance.

4.5.2 Vehicles and moving structures, which cannot pass under the height gauge without striking or touching it, shall not be permitted to pass the overhead equipment or other equipment except in accordance with special instructions.

4.6 Duty Rosters and Medical Fitness Certificates

4.6.1 The rosters detailing the hours of duty and rest for each Gateman is maintained at the gate-lodge. The roster indicates clearly as to which Gateman is required to be on duty at any particular time. No Gateman shall change his hours of duty without the order of the SSE/P.Way (In-charge).

4.6.2 Full particulars regarding the periodical medical examination and vision test of each Gateman is maintained at the gate- lodge.

5 Duties of Gateman

5.1 Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.

5.2 Gateman shall ensure that he is having competency certificate in his possession while on duty.

5.3 Knowledge of Gate working Instructions

Gateman should have knowledge of gate working instructions and shall work accordingly for opening and closing of gates. Gateman should also know the safety rules to protect the track in case of any unsafe situation for train movement.

5.4 Placing of banner flag across the track

The placement of banner flag across the track has to be ensured only when the gate is kept in open condition at non-interlocked level crossings and during emergencies or obstruction on track at other types of gates. {Item (ii) of Rly

board letter No. 2000/Safety (A&R)\9/39, dated 04.11.2003}

5.5 Upkeep of safety equipment and gears

To upkeep the safety equipment like tri-colour torch, banner flag, detonators, flags, hand signals etc. is the responsibility of gateman.

Gateman shall ensure that gate lamps and lamps of all gate signals are lighted and kept burning continuously from sunset to sunrise.

5.6 Channel for flange of wheels

The Gateman shall see that the channel for the flange of the wheel is kept clear.

5.7 Transfer of charge of gate

5.7.1 Except in accordance with special instructions, no gateman shall leave his gate unless another gateman has taken charge of it.

5.7.2 When handing or taking over charge, the Gateman and their relievers should jointly check all the equipment and test all the gears to see that they are in order.

5.8 Alertness

Gateman should be on the alert and be prepared to take immediate action, should danger be apprehended. The keys of the gates shall be on his personal custody.

5.9 Gateman Position & to observe passing trains

During passage of trains, gate man will stand in the manner indicated below: -

5.9.1 Gateman will stand attentively in front of the gate-lodge facing the approaching train.

5.9.2 In day time, gateman shall hold red and green flags furled up on separate sticks in right and left hands respectively.

5.9.3 In night time, gateman shall hold lighted hand signal lamp with white light facing the track.

5.9.4 He shall keep the whistle slung around his neck from a cord.

5.9.5 Gateman shall watch all passing trains and keep sharp look out for any unusual like hot axle, hanging chains, hanging battery, any vehicle/ wagons/ train/ battery box on fire, shifted load, falling material like brake blocks, brake beams, safety bracket, vacuum cylinder, flat tyre or any other situation endangering safe running of trains and be prepared to take such action as may be necessary to ensure safety of trains.

5.9.6 Gate man shall also be prepared to repeat any signal which guard may give to loco pilot on walkie-talkie or in any other way.

5.10 Action in case of unusual occurrence on train

5.10.1 In case gateman observes any unusual with a passing train, he shall take following action: -

(a) He shall take prompt action to warn the loco pilot/guard of

the passing train by showing red flag by day and red light by night.

(b) He shall simultaneously try to draw the attention of the loco pilot/ guard by whistling continuously, shouting, gesticulating, throwing ballast on the brake van or by any other means.

(c) If loco pilot/ guard fail to take notice, gateman shall immediately inform the Station Master/Switchman/ Cabinman, if connected on telephone, to take appropriate action, under exchange of private number.

5.10.2 If gateman notices that a train has parted, he shall not show stop hand signal,

(a) He shall endeavor to attract the attention of the loco pilot/ guard by whistling continuously, shouting, gesticulating and by raising both hands vertically above, quickly parting them and bringing them together in repeated Up and Down motion as high and as low as possible.

(b) In case the train does not stop, gateman shall immediately inform the Station Master/Switchman/Cabinman, if connected on telephone, to take appropriate action, under exchange of private number.

5.11 Defects at level crossing

If any gate or the gate fastenings thereof, or any fixed signal pertaining to the gate becomes out of order, the Gateman shall-

5.11.1 Take action to close the gates, if possible, against road traffic.

5.11.2 After closing the gates, hand signal the train movement passing the level crossing.

5.11.3 If the gate cannot be so closed, put the banner flag or level crossing flag in such a manner as to warn the approaching train to stop short of the gate and thereafter hand signal the train.

5.11.4 In case failure of locking arrangement of Gate Boom/ Leaf, the Gate Boom/Leaf should be properly secured by using a small chain and padlocked.

5.11.5 The Gateman shall report the facts about defect at level crossing to the SM, SSE/JE/P.Way and the nearest Gangmate.

5.12 Action in Emergency

In case of an obstruction at the level crossing, Gateman should maintain the gate signals, if any, in the "ON" position and if unable to remove it, protect the line as under: –

5.12.1 On double line, if both lines are obstructed during day, Gateman shall plant a red banner flag at a distance of 5 metres from the end of check rails on the line on which a train is expected to arrive first, and then plant another red banner flag on the other line at the site of obstruction. The Gateman shall then pick up red hand signal and showing it, proceed on that line towards the direction of an approaching train to a point 600 metres from the level crossing and place one detonator on the line, after which proceed further to not less than 1200 metres from the level crossing and place 3 detonators

on the line about 10 metres apart. Having thus protected the line on which a train is expected to approach first, the Gateman should return to the level crossing, picking up the intermediate detonators on his way back. He shall then proceed on the other line showing red hand signal, place detonators in the similar manner, as done in the other direction and return to the site of obstruction to warn the Loco pilot of an approaching train.

5.12.2 On single line, if the line is obstructed during day, Gateman shall plant a red banner flag at a distance of 5 metres from the end of check rails towards the direction from which a train is expected to arrive first, and then plant another banner flag towards the opposite direction at the site of obstruction. The Gateman shall then pick up red hand signal and showing it, proceed on that line towards the direction of an approaching train to a point 600 metres from the level crossing and place one detonator on the line, after which proceed further to not less than 1200 metres from the level crossing and place 3 detonators on the line about 10 metres apart. After protect the line in the direction from which a train is expected to approach first, return to the site of obstruction, picking up the intermediate detonators on his way back and proceed with all haste in the other direction to protect the line in the similar manner. Having protected the line on both sides, the Gateman should station himself at the place of obstruction to warn the Loco pilot of an approaching train.

5.12.3 At night, Gateman should light the two hand signal lamps and take action to exhibit red light and protect the lines.

5.12.4 Gateman should take immediate action to inform the Gang Mate, JE/SSE/P.Way and the nearest Station Master about the obstruction at the level crossing through messenger or other means available.

5.13 Trespassing

Every gateman shall, as far as possible, prevent any trespassing by persons or cattle.

6 Working Instructions for Engineering Level Crossing Gate

6.1 Mode of Operation

Detailed mode of operation for opening and closing the level crossing gate are provided in the respective Station Working Rules and Gate Working instructions incorporating local operational requirements. When level crossing gate is required to be opened for passage of road traffic, the gateman must first open the gate farthest away from approaching road traffic and then open the gate on the side nearest the approaching road traffic. Actual working of Gate may vary on different zones depending upon local conditions, however broad working instructions for different types of Engineering gates are being discussed in details in following paragraphs. While framing detailed instructions for manned non-interlocked LC gates normally "Closed to Road Traffic", the provision of opening of Gates around every 20 minutes should be incorporated. (Ref:

Railway Board letter no 2000/Safety(A&R)/19/39 Pt dated 4.09.2010)

6.2 Special Instructions for Different Types of Level Crossings

6.2.1 Interlocked with Gate Signals, Provided with Telephone, with Normal Position 'Open to Road Traffic'

(a) Intimation to Gateman

i. Immediately after departure of the train, Station Master/ Switchman/Cabinman shall advise/ intimate the gateman through telephone connected at his end, the number, description, direction and expected time of passage of the train at the gate.

ii. If the telephone is connected to the station at the receiving end, this advice shall be given by the Station Master/Switchman/Cabinman to the gateman, as soon as he receives train entering section advice from the dispatching station.

iii. If the actual running time of the train from either end of the section is less than 10 minutes, Station Master/ Switchman/Cabinman will convey this advice to the gateman before obtaining/granting line clear.

iv. It should be the duty of the gateman to ensure that the gate is closed in time, so that there is no detention to the train or excessive detention to road traffic.

(b) Failure of Telephonic Communication

i. When Telephonic Communication fails or it does not get any response from the Gateman despite 2 or 3 attempts,

Station Master shall issue a caution order to the loco pilot of the departing train.

ii. Station Master shall advise the loco pilot to whistle continuously and proceed cautiously while approaching the gate.

iii. In case the gate signal is 'ON' he should stop short of the gate signal and the Gateman shall show green hand signal flag by day and green light by night to the passing train after closing the gate.

iv. In case of an approaching train, the Station Master shall advise the Station Master at the dispatching end, under exchange of private number that the telephone at the gate has failed.

v. The Station Master at the dispatching end shall then issue a caution order to the loco pilot before dispatching a train in the block section from his end.

vi. Station Master will also advise the gateman through Track maintainer/Patrolman/Loco pilot of the first train that the telephone has become defective.

vii. Station Master should also advise S&T staff responsible for maintenance of the telephone to rectify the same at the earliest.

viii. Normal working will be resumed only after S&T staff rectifies the telephone and issue reconnection/fit memo for the same.

(c) Failure of Lifting Barriers or Leaf Gates

i. When the gate cannot be closed due to failure of lifting barriers or leaf gates, the gateman shall immediately inform the Station Master on duty under exchange of private number, and ensure that lifting barriers or leaf gates do not foul the track.

ii. He shall immediately fix red banner flag by day and red light by night on the post at that end first from which the train is approaching and then at the other end.

iii. Gateman shall secure the gate against road traffic by means of safety chains and padlocks.

iv. After securing the gate against road traffic, gateman shall show green hand signal flag by day and green light by night to the pilot of the approaching train.

v. Station Master on duty shall issue caution order to the loco pilot of a departing train.

vi. He shall also advise the Station Master at the dispatching end, under exchange of private number to issue a caution order to the loco pilot before dispatching a train in the block section.

vii. Station Master shall advise maintenance staff responsible for maintaining the lifting barrier/leaf gates to rectify the same at the earliest.

viii. Normal working will be resumed only after maintenance staff repair the lifting barrier/leaf gates and issue reconnection/fit memo for the same.

(d) Failure of Gate Key with the gate in closed position, when Gate Key cannot be extracted for opening the gate

i. If the gate key cannot be extracted from the winch, gate signal lever or key transmitter then gateman must immediately inform the Station Master/Switchman/ Cabinman on duty on telephone, under exchange of private number.

ii. If Emergency Key is available at the gate lodge, Gateman will take it out from the sealed box by breaking the seal and open the gate for road traffic.

iii. The record of the date and time of breaking the sealed cover of Emergency Key Box shall be recorded and signed with reasons.

iv. Thereafter, the gate must be treated as non-interlocked and procedure for reception/ dispatch of trains as prescribed for non-interlocked gates should be adopted.

v. Station Master on duty shall issue caution order to the loco pilot of a departing train.

vi. He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the loco pilot before dispatching a train in the block section from his end.

vii. Station Master shall advise S&T staff responsible for maintaining the key transmitter to repair the same at the earliest.

viii. Normal working will be resumed only after S&T staff repair the key transmitter and issue reconnection/ fit memo for

the same.

ix. After rectification, the Emergency Key shall be replaced in the Emergency Key Box and resealed by the S&T maintainer.

(e) Failure of the Gate Key with the gate in open condition

i. If the gate key cannot be extracted from the winch, gate signal lever or key transmitter then gateman must immediately inform the Station Master/Switchman/ Cabinman on duty on telephone, under exchange of private number.

ii. Thereafter, the gate must be treated as non-interlocked and procedure for reception/dispatch of trains as prescribed for non-interlocked gates should be adopted.

iii. The gateman shall secure the gate against road traffic by means of chains and padlocks and pass trains on hand signals.

iv. Station Master on duty shall issue a caution order to the loco pilot of a departing train.

v. He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the loco pilot before dispatching a train in the block section from his end.

vi. Station Master shall advise S&T staff responsible for maintaining the key transmitter to repair the same at the earliest.

vii. Normal working will be resumed only after S&T staff repairs the key transmitter and Issue reconnection/ fit

memo for the same.

viii. After rectification, the Emergency Key shall be replaced in the Emergency Key Box and resealed by the S&T maintainer.

(f) Defective Gate Signals

i. The gateman shall treat the gate signal as defective and must not lower them under following circumstances: -

(1) If gate signals can be taken 'OFF' without closing the gate, or

(2) The key can be extracted from the operating winch when the gate is in open condition, or

(3) The key can be extracted from the leaf gates when the gate is in open condition.

ii. If the Gate or the Gate Signal or Warner/Distant Signal becomes defective in 'OFF' position, the gateman will make all efforts to put it at 'ON' position even by cutting signal wires, if necessary.

iii. The gateman will immediately advise the Station Master on duty, under exchange of private number, regarding defective gate signals.

iv. Thereafter, the gate must be treated as non-interlocked and procedure for reception/dispatch as prescribed for non-interlocked gates should be adopted.

v. He shall show green hand signal flag by day and green light by night to the passing train after closing the gate.

vi. Station Master on duty will issue a caution order to the

loco pilot of a departing train.

vii. He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the loco pilot before dispatching a train in the block section from his end.

viii. Station Master shall advise S&T staff responsible for maintaining the gate signal to repair the same at the earliest.

ix. Normal working will be resumed only after S&T staff rectify the defective gate signal and issue reconnection/fit memo for the same.

(g) Obstruction at the Gate

i. If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers/leaf gates or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall immediately put back gate signals to 'ON' position.

ii. He shall fix red banner flag by day and red lamp by night on posts provided at both ends of the gate for this purpose.

iii. Immediately after this, the gateman shall advise the Station Master/Switchman/Cabinman on duty regarding the defects/ obstructions at the gate, under exchange of private number.

iv. If there is no response from the Station Master/ Switchman/Cabinman after two or three attempts, he shall first protect the gate and then inform on phone.

v. Gateman shall then rush with detonators, fusee and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate.

vi. Thereafter he shall protect the gate from the other direction also.

vii. He shall note down the particulars of the road vehicle, name of the driver, owner and relay these details to the Station Master who shall not start the train unless he has been assured by the gateman that the road vehicle or the lifting barriers/ leaf gates are not fouling the track.

viii. The Station Master shall also in form the Station Master at the dispatching end, under exchange of private number, asking him not to dispatch any train in the block section from his end, until the track has been cleared of all obstruction.

ix. After the track has been cleared of all obstructions the gateman shall inform the Station Master accordingly, under exchange of private number.

x. If the gate is broken, but is clear of any obstruction, Station master shall then issue a caution order to loco pilots of all trains to proceed cautiously, and pass the gate signal at 'ON' position on green hand signal of the gateman.

xi. If the gate is not obstructed, Gateman shall secure the gate against road traffic by means of safety chains and padlocks and there after exhibit green hand signal to pass the train.

xii. Station Master shall advise maintenance staff responsible for maintaining the lifting barriers/leaf gates to repair the same at the earliest.

xiii. Normal working will be resumed only after maintenance staff rectify the defective lifting barriers/leaf gates and issue reconnection/fit memo for the same.

(h) Obstruction on the Track near Level Crossing Gate

i. If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment which is visible to the gateman, the gateman and Station Master will adopt the procedure as given under item No. (g) above (Obstruction at the Gate)

ii. If the obstruction fouls the Level Crossing Gate, gateman must keep the gates closed against road traffic till the track is cleared of the obstruction.

6.2.2 Non-Interlocked, Provided with Telephone, with Normal Position "Open to Road Traffic"

(a) Exchange of Private Number

i. When Gate is connected with the station at the dispatching end

(1) Station Master/Switchman/Cabinman at the dispatching end shall advise the gateman the number, description, direction, and expected time of the passage of the train at the gate, under exchange of private number.

(2) Such advice shall be given before taking 'OFF' departure signals or giving an authority to proceed to the loco pilot.

(3) The gateman on receipt of the advice shall close the gate well in time and confirm the same, under exchange of private number.

(4) Station Master/ Switchman/ Cabinman will lower the departure signals after getting the private number of the gateman.

(5) The Gateman shall be authorized to open the LC gate after complete passage of train from the gate by observing tail board/tail lamp. In addition, the Gateman before opening the gate shall do so only if the SM has not advised the Gateman to keep the gate closed for any other train from the same direction or from the other direction under exchange of private number.

ii. When Gate is connected with the station at the receiving end

(1) Station Master/ Switchman/ Cabinman at the dispatching end shall advise the Station Master/ Switchman/ Cabinman at the other end the number, description, direction and expected time of passage of the train at the gate, under exchange of private number.

(2) Such advice shall be given before obtaining line clear.

(3) Station Master/ Switchman/ Cabinman at the receiving end shall in turn convey the same advice to the gateman, under exchange of private number.

(4) Gateman shall close the gate and thereafter give his private number to the Station Master/ Switchman/ Cabinman.

(5) Only then shall the Station Master/ Switchman/ Cabinman at the receiving end grant line clear to the Station Master/ Switchman/ Cabinman at the dispatching end.

(6) The Gateman shall be authorized to open the LC gate after complete passage of train from the gate by observing tail board/tail lamp. In addition, the Gateman before opening the gate shall do so only if the SM has not advised the Gateman to keep the gate closed for any other train from the same direction or from the other direction under exchange of private number.

(b) Failure of Telephonic Communication

i. When Telephonic Communication fails or it does not get any response from the Gateman despite 2 or 3 attempts, the Station Master at the dispatching end shall issue a caution order to the loco pilot before dispatching a train in the block section from his end.

ii. The caution order should advise the loco pilot to whistle continuously and approach the gate cautiously.

iii. The driver should be instructed to pass the gate cautiously, on being hand signaled by the gateman.

iv. In case of an approaching train, the Station Master shall advise the Station Master at the dispatching end, under exchange of private number that the telephone at the gate has failed.

v. The Station Master at the dispatching end shall then issue a caution order to the loco pilot before dispatching a train in the block section from his end.

vi. Station Master shall also advise the gateman through track maintainer/ patrolman or loco pilot of the first train that the telephone has become defective.

vii. He should also advise S&T staff responsible for maintenance of the telephone to rectify the defect at the earliest.

viii. Normal working will be resumed only after S&T staff rectifies the telephone and issue reconnection/fit memo for the same.

(c) Failure of Lifting Barriers or Leaf Gates

i. When the gate cannot be closed due to failure of lifting barriers or leaf gates, the gateman will immediately inform the Station Master/ Switchman/ Cabinman on duty, under exchange of private number, and ensure that lifting barriers or leaf gates do not foul the track.

ii. He shall immediately fix red banner flag by day and red light by night on the post at that end first from which the train is approaching and then at the other end.

iii. Gateman shall secure the gate against road traffic by means of safety chains and padlocks.

iv. After securing the gate against road traffic, he shall show green hand signal flag by day and green light by night to the loco pilot of the approaching train.

v. Station Master on duty shall Issue caution order to the loco pilot of a departing train.

vi. He shall also advise the Station Master at the dispatching end, under exchange of private number, to issue a caution

order to the loco pilot before dispatching a train in the block section from his end.

vii. He should also advise maintenance staff responsible for maintenance of the lifting barriers/leaf gates to rectify the defect at the earliest

viii. Normal working will be resumed only after maintenance staff rectify the lifting barriers/leaf gates and issue reconnection/ fit me mo for the same.

(d) Obstruction at the Gate

i. If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers/ leaf gates or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall immediately fix red banner flag by day and red lamps by night on posts provided at both ends of the gate for this purpose.

ii. Immediately after this, the gateman shall advise the Station Master/ Switchman/ Cabinman on duty, regarding the defect/obstruction at the gate, under exchange of private number.

iii. Station Master/ Switchman/ Cabinman on duty shall be advised to put the reception/departure signals back to 'ON' position, if taken 'OFF' for a train.

iv. If there is no response from the Station Master/ Switchman/Cabinman after two or three attempts, he shall first protect the gate and then inform on phone.

v. Gateman shall then rush with detonators, fusee, and red flag by day and red hand signal lamp by night in the

direction of the approaching train and protect the gate.

vi. Thereafter he shall protect the gate from the other direction also.

vii. He shall note down the particulars of the road vehicle, name of the driver, owner and relay these details to the Station Master who shall not start the train unless he has been ensured by the gateman that the road vehicle or the lifting barriers/leaf gates are not fouling the track.

viii. The Station Master shall also inform the Station Master at the dispatching end, under exchange of private number, asking him not to dispatch any train in the block section from his end, until the track has been cleared of all obstruction.

ix. After the track has been cleared of all obstructions the gateman shall inform the Station Master accordingly, under exchange of private number.

x. If the gate is broken, but is clear of any obstruction, Station master shall then issue a caution order to loco pilots of all trains to proceed cautiously, and pass the gate on green hand signal of the gateman.

xi. If the gate is not obstructed, Gateman shall secure the gate against road traffic by means of safety chains and padlocks and there after exhibit green hand signal to pass the train.

xii. Station Master shall advise maintenance staff responsible for maintaining the lifting barriers/leaf gates to repair the same at the earliest.

xiii. Normal working will be resumed only after maintenance staff rectify the defective lifting barriers/leaf gates and issue reconnection/fit memo for the same.

(e) Obstruction on the Track near Level Crossing

i. If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment which is visible to the gateman, the gateman and Station Master will adopt the procedure given under item No. (d) above (Obstruction at the Gate).

ii. If the obstruction fouls the Level Crossing Gate, gateman must keep the gates closed against road traffic till the track is cleared of the obstruction.

6.2.3 Non-Interlocked, Provided with Telephone, with Normal Position "Closed to Road Traffic"

(a) Exchange of Private Number

i. Gateman muse seek permission from Station Master/ Switchman/Cabinman for opening the gate.

ii. If the gate is required to be opened to pass the road traffic, the Gateman shall exchange private number with the SM, and confirm that the train has passed completely from his gate, thereafter; the SM may allow the gateman to open the gate. In such a situation the SM, before dispatching or giving line clear for any other train in the block section in question shall ensure that the level crossing gate is closed for road traffic and assurance of the gateman is taken through exchange of private number.

iii. Suitable entries shall be made by the Station Master/

Switchman/Cabinman in the Train Signal Register/Cabin Operation Register, Private Number Book and Log Book in red ink.

iv. After passage of road traffic, the gateman shall close the gate and confirm this to Station Master/Switchman/Cabinman, under exchange of private number.

v. Before any train is allowed to enter the block section again, the Station Master/Switchman/Cabinman must ensure that private number from the gateman has been received in token of his having closed the gate.

vi. Gate once closed for road traffic must on no account be opened unless this is authorized by the Station Master/ Switchman/Cabinman, under exchange of private number.

(b) Failure of Telephonic Communication

i. When Telephonic Communication fails or it does not get any response from the Gateman despite 2 or 3 attempts, Station Master at the dispatching end shall issue a caution order to the loco pilot of the departing train.

ii. The caution order shall advise the loco pilot to whistle continuously and approach the gate cautiously.

iii. The loco pilot shall be instructed to pass the gate cautiously, on being hand signaled by the gateman. If hand signal is not seen, loco pilot should be prepared to stop short of the gate and depute his Assistant Loco pilot to see the condition of the gate.

iv. In case of an approaching train, the Station Master shall advise the Station Master at the dispatching end, under

exchange of private number that the telephone at the gate has failed.

v. The Station Master at the dispatching end shall then issue a caution order to the loco pilot before dispatching a train in the block section from his end.

vi. Station Master shall also advise the gateman through track maintainer/patrolman or loco pilot of the first train that the telephone has become defective.

vii. He should also advise S&T staff responsible for maintenance of the telephone to rectify the same at the earliest.

viii. Normal working will be resumed only after S&T staff rectifies the telephone and issue reconnection/fit memo for the same.

(c) Failure of Lifting Barriers or Leaf Gates

i. When the gate cannot be closed due to failure of lifting barriers/ leaf gates, the gateman will immediately inform the Station Master on duty, under exchange of private number, and ensure that lifting barriers or leaf gates do not foul the track.

ii. He shall immediately fix red banner flag by day and red light by night on the post at that end first from which the train is approaching and then at the other end.

iii. Gateman shall secure the gate against road traffic by means of safety chains and padlocks.

iv. After securing the gate against road traffic, he shall show green hand signal flag by day and green light by night to the loco pilot of the approaching train.

v. Station Master on duty shall issue caution order to the loco pilot of a departing train.

vi. He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the loco pilot before dispatching a train in the block section from his end.

vii. He should also advise maintenance staff responsible for maintenance of the lifting barriers/ leaf gates to rectify the same at the earliest.

viii. Normal working will be resumed only after maintenance staff rectify the lifting barriers/ leaf gates and issue reconnection/fit memo for the same.

(d) Obstruction at the Gate

i. If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers/leaf gates or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall immediately fix the red banner flag by day and red lamp by night on posts provided at both ends of the gate for this purpose.

ii. Immediately after this, the gateman shall advise the Station Master/Switchman/Cabinman on duty, regarding defects/ obstruction at the gate, under exchange of private number.

iii. Station Master/Switchman/Cabinman on duty shall be advised to put the reception/departure signals back to 'ON' position, if taken 'OFF' for a train.

iv. If there is no response from the Station Master/Switchman/ Cabinman after two or three attempts, he shall first protect

the gate and then inform on phone.

v. He shall then rush with detonators, fusee and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate.

vi. Thereafter he shall protect the gate from the other direction also.

vii. He shall note down the particulars of the road vehicle, name of the driver, owner and relay these details to the Station Master who shall not start the train unless he has been ensured by the gateman that the road vehicle or the lifting barriers/leaf gates are not fouling the track.

viii. The Station Master shall also inform the Station Master at the dispatching end, under exchange of private number, asking him not to dispatch any train in the block section from his end, until the track has been cleared of all obstruction.

ix. After the track has been cleared of all obstructions the gateman shall inform the Station Master accordingly, under exchange of private number.

x. If the gate is broken but is clear of any obstruction, Station Master shall then issue a caution order to loco pilots of all trains to proceed cautiously, and pass the gate on green hand signal of the gateman.

xi. If the gate is not obstructed, Gateman shall secure the gate against road traffic by means of safety chains and padlocks and there after exhibit green hand signal to pass the train.

xii. Station Master shall advise maintenance staff responsible for maintaining the lifting barriers/leaf gates to repair the same

at the earliest.

xiii. Normal working will be resumed only after maintenance staff rectify the defective lifting barriers/leaf gates and issue reconnection/fit memo for the same.

(e) Obstruction on the Track near Level Crossing

i. If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment which is visible to the gateman, the gateman and Station Master will adopt the procedure given under item No. (d) above.

ii. If the obstruction fouls the Level Crossing Gate, gateman he must keep the gates closed against road traffic till the track is cleared of the obstruction.

6.2.4 Non-Interlocked, Not Provided with Telephones, with Normal Position "Closed to Road Traffic"

(a) Method of operation

i. Whenever the gateman has to pass a road vehicle across the level crossing gate, he must ensure that no train is in sight in either direction, nor there any audible sounds of an approaching train.

ii. He shall then plant red banner flags by day and red lamps by night on posts provided on both sides of the gate for this purpose.

iii. He shall then open the gate to pass road traffic, and close it again immediately thereafter.

iv. He shall then remove the red banner flags by day and red lamps by night.

v. If the gateman sees or hears a train approaching the level crossing gate when the gate is in open condition, he shall rush with detonators, fusee and red flag by day and red hand signal lamp by night towards the approaching train.

vi. If the train is too close, he shall place detonators on the line at a distance as far away he can go.

vii. Thereafter, he shall light up and fix the fusee to warn the loco pilot and stop the approaching train by waving his red flag by day red hand signal lamp by night repeatedly.

viii. If there is sufficient time, the gateman will protect his gate as stipulated in Para 5.12 (Action in Emergency).

(b) Failure of Lifting Barriers or Gate Leaves

i. Failure when the Gate is in open condition

(1) Gateman shall first ensure that the lifting barriers/leaf gates do not foul the track.

(2) Gateman shall secure the gate against road traffic by means of safety chains and padlocks.

(3) He shall fix red banner flags by day and red lamps by night on posts provided at both sides of the gate for this purpose.

(4) If he sees a train approaching the gate before he has secured the gate, he shall rush towards the train with detonators, fusee and red flag by day and red hand signal lamp by night.

(5) He shall place detonators on the line at a distance as far away he can go.

(6) Thereafter, he shall light up and fix the fusee to warn the loco pilot and stop the approaching train by waving his red flag by

day red hand signal lamp by night repeatedly.

(7) He shall send information through Gangmate/ patrolman/ keyman or loco pilot of a passing train to the SSE/JE, P.Way / Station Master concerned, asking for necessary action.

(8) Station Master on duty shall issue caution order to the loco pilot of a departing train.

(9) He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the loco pilot before dispatching a train in the block section from his end.

(10) Station Master shall advise maintenance staff responsible for maintaining the lifting barrier/leaf gates to rectify the same at the earliest.

(11) Normal working will be resumed only after maintenance staff repair the lifting barrier/leaf gates and issue reconnection/fit memo for the same.

ii. Failure when the Gate is in closed condition

Gate man shall send information through Gangmate/ patrolman/ keyman or loco pilot of a passing train to the SSE/JE, P.Way/ Station Master concerned, asking for necessary action.

(c) Obstruction at the Gate

i. If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers/ leaf gates or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall immediately fix red banner flag by day and red lamp by night on the post provided at both ends

of the gate, for this purpose.

ii. Gateman shall then rush with detonators, fusee and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate as stipulated in Para 5.12 (Action in Emergency).

iii. Thereafter he shall protect the gate from the other direction also.

iv. He shall note down the particulars of the road vehicle, name of the driver, owner and relay these details to the nearest Station Master and SSE/JE, P.Way through a track maintainer/ patrolman/ keyman or any other railway employee or through the loco pilot of a passing train.

v. After being informed, the Station Master shall not start any train unless he has verified that the obstruction has been removed and the gate is safe for the passage of trains.

vi. He shall also inform the Station Master at the dispatching end, under exchange of private number, not to dispatch any train in the block section until the track has been cleared of all obstruction.

vii. After the track has been cleared of all obstructions the gateman shall inform the Station Master accordingly.

viii. If the gate is broken but is clear of any obstruction, Station Master shall then issue a caution order to loco pilots of all trains to proceed cautiously and pass the gate on green hand signals of the gateman.

ix. If the gate is not obstructed, Gateman shall secure the gate against road traffic by means of safety chains and padlocks

and there after exhibit green hand signal to pass the train.

x. Station Master shall advise maintenance staff responsible for maintaining the lifting barriers/ leaf gates to repair the same at the earliest.

xi. Normal working will be resumed only after maintenance staff rectify the defective lifting barriers/leaf gates and issue reconnection/fit memo for the same.

(d) Obstruction on the Track near Level Crossing

i. If there is a rail fracture/or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment which is visible to the gateman, the gateman and Station Master shall adopt the procedure given under item No. (c) above (Obstruction at the Gate).

ii. If the obstruction fouls the Level Crossing Gate, gateman must keep the gates closed against road traffic till the track is cleared of the obstruction.

***

REFERENCES

Sr. No.	Description
1.	Indian Railways (Open Lines) General Rules
2.	Indian Railways Permanent Way Manual
3.	Working instructions for manned level crossings issued by Railway Board vide letter no. 2000/safety(A&R) 19/39 dated 08.05.2002
4.	Railway Board L. No. 2000/safety(A&R) 19/39 dated 04.11.2003
5.	Railway Board L. No. 2000/safety(A&R) 19/39 dated 04.09.2008
6.	Railway Board L. No. 2000/safety(A&R) 19/39 dated 18.08.2008
7.	Railway Board L. No. 2000/safety(A&R) 19/39 dated 15.12.2009
8.	Railway Board L. No. 2000/safety(A&R) 19/39 Pt. dated 24.09.2010

***

NOTES

1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	

QUALITY POLICY

To develop safe, modern and cost effective Railway technology complying with Statutory and Regulatory requirements, through excellence in Research, Designs & Standards and Continual improvements in Quality Management System to cater to growing demand of passenger and freight traffic on the Railways.

Disclaimer

The document prepared by CAMTECH is meant for the dissemination of the knowledge/ information mentioned herein to the field staff of Indian Railways. This document is not statutory & instructions given in it are for the purpose of guidance only. While reasonable care and effort has been taken to ensure that information given is at the time believed to be fare and correct and opinion based thereupon are reasonable. In case of any doubt, the reader/user is supposed to refer the relevant codes/ manuals available on the subject before actual implementation in the field. The information contained in this pamphlet does not supersede any existing provisions laid down in G & SR, instructions issued by Railway Board and RDSO.

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 & any specific comments, please write to us:

Contact person:	**Joint Director (Civil)**
Postal Address:	**Centre for Advanced Maintenance Technology, Maharajpur, Gwalior (M.P.) Pin Code – 474 005**
Phone	**: 0751 - 2470869**
Fax	**: 0751 – 2470841**
E-mail	**: dircivilcamtech@gmail.com**