

भारत सरकार GOVERNMENT OF INDIA
रेल मंत्रालय MINISTRY OF RAILWAYS
रेलवे बोर्ड RAILWAY BOARD

No. 2017/Transf.cell/Civil/03

New Delhi, dated: 05 - 02- 2018

The General Manager, All Indian Railways/PUs, NF(Con), CORE
The DG/RDSO & NAIR,
CAOs, DMW/Patiala, WPO/Patna, COFMOW/NDLS, RWP/Bela

**Sub: Report of the Committee to Review Uniform & Tool Kits for
Trackmen/Keymen/Patrolmen**

Ref: Board's letter No. 2018/Transf.cell/03 dated Jan 8, 2018

Considering the importance of Trackmaintainers in ensuring safe running of trains on IR and the hardships being faced by them, Board (CRB) had constituted a committee of GMs of SCR (Convener), CR & NR to recommend measures that would improve their working conditions including better uniform and tool kits.

Committee's report with all annexures is enclosed herewith and same is uploaded in Transformation Cell section of the Railway Board's website (<http://www.indianrailways.gov.in/railwayboard>). Based on the recommendations of the committee, Board (ME, MS, FC & CRB) have approved the following for compliance.

1.0 Dress Allowance:

1.1 The Dress Allowance for the Track Maintainers as per RBE No.141/2017 dated 03.10.2017, shall continue to be followed. For Track women, dress allowance will cover Kurta (both summer & winter), Salwar, Jersy, headgear other than helmet, mittens, socks and water bottles. The colour scheme of dress for Track women will be the same as that for Trackmen.

2.0 Uniform and Protective Gears:

As the Track Maintainers have to walk on ballast in extreme climatic conditions ranging from very high temperature during summer while carrying out hot weather patrolling and also in very low temperatures in the night for cold weather patrolling, it is necessary to provide special gears to them to protect them from extreme weather conditions. Also the work of the track maintainers involves working with heavy objects like rails and sleepers, which can topple on their feet while working. The feet need to be adequately protected. Their working conditions are similar to that as existing on a shop floor or in construction projects. Hence following special protective gears are to be provided to them:

Sanjiv Kumar

5/2/18

- 2.1 The following job specific protective gears may be provided to all Track maintainers including P-way-artisans and their helpers. These items may be provided on division basis, modification if any due to local climatic conditions, may be considered with the approval of DRM.

Table-1

S. No.	Description	Functional specification	Scale	Approx. Cost (inRs.)
1.	Rain Coat with cap/hood and separate waterproof trouser	Waterproof coat and trouser with full sleeves and cap/hood.	Once in a year	1200/-
2(a)	Winter Jacket	Jacket with inner lining with/without hood/cap, orange color superior quality.	Once in 2 years	2500/-
OR				
2(b) **	Clothing for Subzero climate i. Jacket ii. Trouser iii. Gloves iv. Snow boots v. Cap	As per military clothing from Ordinance factories/approved suppliers of Ordinance factories.	Once in 2 years	10,000/-
3.	Safety Shoes	As per IS 15298 (Part 2): 2011 / ISO 20345:2004 Some of the reputed brands are Bata, Liberty, Action etc.	Once in six Months	1400/-
4.	Luminous vest	Retro-reflective orange colour, IS-15809 of 2008 specified by EN471 Standard	Once in Six months	500/-
5.	Safety Helmet with detachable miner's light	Miner's helmet to IS specifications IS 2925-1884 (modified in 2010) with detachable headlights having flexibility for rotation provided with straps.	Once in a year	1400/-
6	Tool Kit Bag	As developed by PUNE Division, CR or Ferozpur Division of NR Material –Matte Nylon-1680 Black, Red & Orange Color, with canvas for lining	Once a Year	1400/-
7*	Tricolor LED 3-cell Torch/ rechargeable torch	As being used by SCR / NR	Once a Year	1000/-

* Tricolor LED 3-cell Torch/ rechargeable torch to be provided to Mate, Keymen and all track maintainers deputed for night patrolling

** Winter jackets as per item 2a) will not be supplied in subzero climate region, as provisioning of the same is already included in item 2b). In addition, any specific requirement for any particular area/climatic condition may be assessed by the respective DRM.

Sanjeeb Kumar



3.0 Tools and Equipment:

- 3.1 Provide light weight improvised tools and equipment such as spanner, hammer, crow bar, mortar pan etc. to track maintainers, as per extant Board's instructions.
- 3.2 Provide tricolor LED 3-cell Torch/ rechargeable torch developed by NR/SCR in place of H. S. Lamps to Mate, Keymen & all Track maintainers deputed for Night patrolling. Regarding payment for purchase of dry cells to the Track Maintainers deputed for night patrolling duties, it has already been decided by Board (ME & FC) vide Railway Board's letter no 2016/CE-I/GNS/4 pt. dated 07.12.2017 to pay @ Rs 150 per month to all track maintainers deputed for night patrolling. Same may be followed.
- 3.3 Improved staff for patrolman, as being used on SCR may be provided in place of conventional staff.
- 3.4 Sturdy light weight backpack Tool Kit bag with provision to keep various equipment as developed by Pune Division of Central Railway and Firozpur Division of Northern Railway were considered appropriate. Such Tool Kit bag may be provided to all Track maintainers including P-way-artisans and their helpers.

4.0 Mode of Procurement

As on date Stores department is procuring luminous vests; This system may continue. The other items mentioned in **table 1** (para 2.1) above, may be procured at Divisional Level through **Spot purchase committee** comprising of Sr.DEN/DEN incharge, Sr.DFM/DFM, Sr.DMM/DMM. Once the system gets stabilized, and the vendors are developed; these may be procured through stores department of the division.

5.0 Rakshak

"Rakshak" protection system for patrolmen/trackmen has been adopted by SCR on Secunderabad- Kazipeth section in a stretch of 24 KMs and has been found to be useful in getting advance information regarding approaching trains by way of LED indication along with audible buzzer and vibration. Keeping in view large number of run-over cases of Trackmen that occur during discharge of their duty on Track, putting in place a Rakshak type protection system is essential and needs to be expeditiously implemented. However since the system is still in infancy stage, deployment on entire Rail Network may not be feasible right now. However keeping in view large number of run-over cases, it has been decided to extend deployment of Rakshak type protection systems on the entire **High Density Network** on a crash basis. This being a safety item, may be booked under RRSK.

Sanjeev Kumar

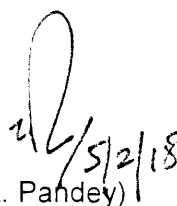


6.0 Gang Tool cum Rest Room

A tool cum rest room should be provided in the gang beat of each sectional gang preferably at the station or at level crossing. The room may have resting facility, private lockers for keeping their small belongings. The toolbox can also be accommodated in the same building. This type of accommodation can be provided near the station building as far as possible or at the level crossing falling in the gang beat. In addition to regular supply of electricity alternate source of solar lighting may also be provided in these rooms. For watering, hand-pump/piped water supply may be provided. Prefabricated modern construction methods already in use on certain Railways (KGP div of SER & of WCR) may be used for early and quality construction. These should be constructed in a phased manner through funds from Track renewal works/RRSK. Priority may be decided locally by the DRM.

This issues with the concurrence of Associate Finance of Transformation Cell Railway Board.

Kindly acknowledge the receipt and ensure compliance.


(T. K. Pandey)

Executive Director, Transformation

1. PFAs, All Indian Railways & Production Units
2. The ADAI (Railways), New Delhi
3. The Director of Audit, All Indian Railways


(Sanjeeb Kumar)

Executive Director (Accounts), Transformation

Copy to

4. The Director, Indian Railway Institute of Civil Engineering, Pune.
5. The Director, Indian Railway Institute of Mechanical and Electrical Engineering, Jamalpur.
6. The Director, Indian Railway Institute of Signal Engineering and Telecommunications, Secunderabad.
7. The Director, Indian Railway Institute of Electrical Engineering, Nasik.
8. The Executive Director, Indian Railways Centre for Advanced Maintenance Technology, Gwalior.
9. The Director, Indian Railway Institute of Transport Management, Lucknow.
10. The Registrar, Railway Claims Tribunal, Delhi.
11. The General Secretary, IRCA, New Delhi.

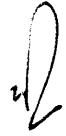
12. The Chief Commissioner of Railway Safety, Lucknow.
13. The Secretary, Railway Rates Tribunal, Chennai.
14. The Chairman, Railway Recruitment Board, Ahmedabad, Ajmer, Allahabad, Bangalore, Bhopal, Bhubaneswar, Chandigarh, Chennai, Gorakhpur, Guwahati, Jammu & Srinagar, Kolkata, Malda, Mumbai, Muzaffarpur, Patna, Ranchi, Secunderabad and Trivandrum.

Copy to:

1. The Genl. Secy., AIRF, Room No. 248, & NFIR Room No. 256-C, Rail Bhavan
2. The Secy. Genl., IRPOF, Room No. 268, FROA, Room No. 256-D & AIRPFA, Room No. 256-D Rail Bhavan

Copy to:

1. PS to MR, MOS(S), MOS(G)
2. CRB, FC, ME, MTR, MRS, MS, MT, SECY, DG (RHS), DG (RPF), DG (Stores), DG(Pers), DG(S&T)
3. All AMs, Principal Executive Director & Executive Directors of Railway Board



T. K. Pandey
Executive Director/Transformation

**Government of India
Ministry of Railways
Railway Board**

Date Jan 8, 2018

No. 2018/Transf.cell/03

General Manager
Central Railway,
Northern Railway,
South Central Railway

Sub : Committee to review Uniform & Tool Kits for Trackmen/ Keymen

It has been decided to constitute a Committee to review supply of uniform and tool kits to Trackmen/ Keymen. The Committee will comprise the following:

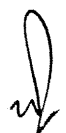
		Convenor
(a)	GM/SCR	Member
(b)	GM/NR	Member
(c)	GM/CR	Member Secretary
(d)	ED (Civil)/Transformation	

2.0 The Terms of Reference of the Committee will be as under:

- a. Suggest Uniform to be used by Trackmen/keymen. Uniform may include shoes, overcoat / jacket etc. The diversity of seasons may also be taken into account.
- b. Suggest tool kits and other equipment / aids (Tricolor LED lamps, chargeable torches) of light weight and ergonomical design to improve their productivity.
- c. Suggest mode of procurement and periodicity.
- d. Suggest measures to develop suppliers / vendors for ensuring sustained quality of Uniform and customized tool kits.
- e. Suggest any other measures that may be necessary to improve the working of Trackmen/keymen.
- f. May look into the extant guidelines and best practices prevailing on Zonal Railways

3.0 The Committee may submit its report within 15 days positively from the date of constitution of this Committee.

This issues with the approval of **Chairman, Railway Board**.


(T. K. Pandey)
Executive Director (Transformation)
Railway Board

Copy to:

- PSOs/OSD to CRB, FC, ME, MRS, MS, MTR, MT, Secy., DGs, AMs
The **General Managers**, All Indian Railways (including Metro & CORE), Construction and Production Units.
The Director General, RDSO/Lucknow and NAIR/Vadodara.
The EDs, Railway Board.
The Convenor and Members of the Committee.

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

No. E(W)95UN1-19

New Delhi, dt. 27.12.2005

The General Manager(P),
All Indian Railways &
Production Units.

(Uniform Circular No. 3 of 2005)

**Sub: Issue of uniform and other accessories to
Gangmen(Trackmen), Keymen, Mates and Patrolmen.**

Board had constituted a Committee of Executive Directors of Railway Board viz. EDCE(G) as Convener, EDFE and EDRS(G) as Members to review the existing norms and specifications for the uniform and other protective garments being supplied to Gangmen, Keymen, Mates and Patrolmen and to examine the need and justification for additional items, if any, to be given to these categories of staff and to make appropriate recommendations with the likely financial implications. The Committee after wide interaction with various gangs/units on the Railways and detailed discussions with concerned railway officials and based on suggestions received from Railways, framed their recommendations regarding supply of uniform and other protective equipments/accessories to these categories of employees, as under:-

S. N.	Item	Present Yardstick		Proposed Yardstick		Remarks
		Description/ Specification	Scale	Description	Scale	
1.	Shirt (a)Summer	Half Sleeves, cotton of orange colour(10-S)	One per year	Half sleeves of handloom polyster cotton blended, 67/33 shirting 88/91 cms wide conforming to IS:11815/86 of orange colour	Two per year	In cold and only winter climate, 4 shirts of full sleeves can be given every year.
	(b)Winter	Full sleeves, cotton of orange colour(8S)	One per year	Full sleeves of handloom polyster cotton blended 67/33	Two per year	

S. N	Item	Present Yardstick		Proposed Yardstick		Remarks
		Description/ Specification	Scale	Description	Scale	
				shirting 88/91 cm wide conforming to IS: 11815/86 of orange colour		
2.	Trousers	Drill Khaki (3-S)	2 per year	Drill Khaki of handloom polyester cotton blended 67/33 suiting 138/142 cms wide conforming to IS: 11248/85	3 per year	
3.	Jersey (woolgn) or cumbli	Of maroon colour with full sleeves in one piece without stitching at shoulders with a short 'V' neck or Cumbli Coarse thick wool, hand woven in size 220x152 cms	One in 5 years to one every year depending on the climate. One for 5 years to one for 2 years depending on climatic region.	No change		Quality needs to be properly supervised
4.	Overcoat (a) Summer & mild winter (b) Summer & winter. (c) Very cold (d) winter only		(a) One per 5 years (b) One per 5 years (c) One per 4 years (d) One per 3 years	No change		

S. N.	Item	Present Yardstick		Proposed Yardstick		Remarks
		Description/ Specification	Scale	Description	Scale	
5.	Shoes	Sturdy canvas shoes with grooved rubber soles suitable for walking along tracks.	2 pairs per year	Canvas hunter shoe/ jungle boot with proper heat insulation for sole-conforming to BIS 15298	1 pair per year.	Shoes should be branded one
6.	Rain coat 17-PC, Cape, water proof with detachable hood, made from fabric, rubberized water proof block.		Being given only while during monsoon patrolling duty and is kept as T&P item.	Rain coat – rubberized water proof coat with full sleeves with cap/hood conforming to IS :59159-70	One in 3 years for regions having rainfall less than 600 mm; for other regions, it should be one for every 2 year.	
7.	Head gear	Helmet- IS:2925/1984 (Ref. Board's letter no. E(W)95UN1/ 19 dt. 10.05.05	Being given as T&P item when work is to be done in a tunnel/ bridge/ construction site.	Cotton safa/pagri similar to what being given to trolleyman 4.5 m long & 8.2 cm wide for all climates except cold & only winter where woolen monkey cap should be given.	In addition to Helmet, following items may also be given. Safa/Pagri 2 for two years Or Monkey cap (woolen) one for 2 years	At present, this is being given to only Trolleyman.
8.	Mittens/ gloves	To be given only in very cold climate	One for 1 year	(a) Summer & Mild winters (b) Summer & Winter - (c) Very cold & winter only –	(a) 2 pair of cotton gloves every year. (b) One pair cotton and one pair woolen every year. (c) 2 pair woolen every year.	

S. N.	Item	Present Yardstick		Proposed Yardstick		Remarks
		Description/ Specification	Scale	Description	Scale	
9	Socks	Cotton socks	3 pair per year	(a) Winter and mild winter (b) Summer & Winter (c) Very cold (d) Winter only	(a) 4 pair cotton (b) 2 pair cotton & 2 pair woolen (c) & (d) 4 pair woolen only.	
10.	Luminescent Vests (Safety Jacket) (Ref. Board's letter No. E(W)95 UN-1/19 dt. 28.08.03)	Good quality	One in two year	No change		
11.	Water bottle	-----	-----	Milton type bottle of 2 litres having proper heat insulation so that water can be kept cool for 5-6 hours.	One for 2 years	

The above recommendations have since been accepted by Board and MR.

2. It is advised that the above yardstick may be implemented immediately after existing stock of uniform/protective accessories etc. to Gangmen and allied categories is exhausted.

3. For all other purposes, provision contained in the Dress Regulations, ~~1980~~ 2009 shall apply.

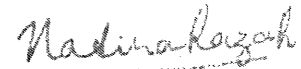
4. This issues with the concurrence of Finance Directorate of Ministry of Railways.

5. Hindi version will follow.


(P.N. Kumaran)
Deputy Director Estt. (Welfare)
Railway Board

Copy forwarded to :-

1. The General Secretary, NFIR, Room No.253, Rail Bhavan, New Delhi. (with 35 spares)
2. The General Secretary, AIRF, Room No.256-E, Rail Bhavan, N.Delhi (with 35 spares)
3. The Members of the National Council, Departmental Council and Secretary, Staff Side, National Council, 13-C, Ferozeshah Road, New Delhi (with 90 spares)
4. The Secretary General, FROA, Room No.256-A, Rail Bhavan, New Delhi (with 5 spares)
5. The Secretary, RBSS, Group 'A' Officers Association (with 5 spares)
6. The President, Railway Board Class II Officers' Association (with 5 spares)
7. The Secretary General, IRPOF, Room No.268, Rail Bhavan, New Delhi (with 5 spares)
8. The President, Indian Railway Class II Officers Association, Rail Nilayam, Secunderabad (with 5 spares)
9. The Secretary, Railway Board Ministerial Staff Association (with 5 spares)
10. The Secretary, Railway Board Class IV Staff Association (with 5 spares)
11. The General Secretary, All India RPF Association, Room No.256-D, Rail Bhavan, New Delhi.
12. The Secretary, Staff Side, National Council(JCM), 13-C, Ferozeshah Road, New Delhi-110001.



for Secretary/Railway Board

No. E(W)95UN1/19

Rail Bhavan, New Delhi-110001 dt. 28. 12.2005

Copy to :-

The Deputy Comptroller and Auditor General of India (Railways),
Mathura Road, New Delhi (with 40 spares).



for Financial Commissioner/Railways

No. E(W)95UN1/19

Rail Bhavan, New Delhi-110001 dt. 28. 12.2005

Copy forwarded to :-

1. The GM N.F. Railway (Const.), CAOs, Southern Railway (Const.) and Central Railway(Const.)
2. The FA & CAOs, All Indian Railways, Production Units, N.F. Railway (Const.) and Southern Railway (Const.)
3. The Director General, RDSO/Lucknow
4. The General Manager and FA & CAO, Metro Railway/Calcutta
5. The General Manager and FA & CAO, COFMOW/New Delhi
6. The General Manager and FA & CAO, CORE/Allahabad
7. The Principal, Railway Staff College/Vadodara
8. The CAO (Const.), MTP(R)/Mumbai
9. The CAO (Const.), MTP(R)/Chennai
10. The Director, CAMTECH/Gwalior-474020
11. The Director, IRICEN/Pune, IRIEEN/Nasik Road, IRIMEE/Jamalpur, IRISSET/Secunderabad
12. The Managing Director, RITES, IRCON, IRFC, CONCOR of India Limited, Executive Director, CRIS

GOVERNMENT OF INDIA (BHARAT SARKAR)
Ministry of Railways (Rail Mantralaya)
(Railway Board)

PC-VII No.- 64
 File No. PC-VII/2017/I/7/5/7

RBE No. 141/2017
 New Delhi, Dated: 03.10.2017

The General Managers/ CAOs(R),
 All Indian Railways and Production Units,
 (As per mailing list)

Subject: Implementation of the recommendations of the Seventh Central Pay Commission – Dress Allowance.

In terms of extant instructions, the Uniform- related allowances being paid to Railway employees as admissible included Kit Maintenance Allowance, Shoe Allowance, Uniform Allowance and Washing Allowance.

2. Consequent to the decision taken by the Government on the recommendations of the 7th CPC, these uniform-related allowances have been subsumed into a single Dress Allowance. The President is pleased to approve payment of this Dress Allowance to the categories of employees and at the rates as listed below:

S.No.	Category of employee	Rate (in ₹)
1.	Officers of RPF/RPSF	20,000/- per annum
2.	Personnel Below Officer Rank of RPF, Station masters of Indian Railways	10,000/- per annum
3.	Other categories of staff who were supplied Uniforms and are required to wear them regularly like Trackmen, Running Staff of Indian Railways, Staff Car Drivers, MTS, Canteen staff of Non-Statutory departmental Canteens, etc.	5,000/- per annum
4.	Nurses	1800/- per month

3. With this notification of Dress Allowance, existing uniform-related allowances including those for maintenance & washing of uniforms, will no longer be payable separately. Existing orders for payment of such separate uniform-related allowances including Shoe Allowance therefore stand superseded.

4. With the payment of this Dress Allowance, categories of staff who were earlier being provided Uniforms, will henceforth not be provided with Uniforms.

5. The amount of Dress Allowance shall be credited to the salary of entitled employees directly once a year in the month of July.

6. This allowance covers only the basic uniform of the employees. Any special clothing like the fluorescent clothing provided to Trackmen of Indian Railways will continue to be provided by this Ministry as per existing norms.

7. The rates of Dress Allowance will go up by 25% each time Dearness Allowance rises by 50%.

8. These orders shall take effect from 01st July, 2017.

Hindi version will follow.


Praya Kumar G
Deputy Director(Pay Commission) VII
Railway Board

No. PC-VII/2017/I/7/5/7

New Delhi, dated: 03.10.2017

Copy (with 40 spares) forwarded to the A.D.A.I., Railways, New Delhi.


For Financial Commissioner, Railways

No. PC-VII/2017/I/7/5/7

New Delhi, dated: 03.10.2017

Copy forwarded to :-

1. PFAs, All Indian Railways, PUs, NFR(Const).
2. The DG, National Academy of Indian Railways, Vadodara.
3. The General Manager, CORE/Allahabad
4. The Director General, RDSO, Lucknow,
5. The General Manager and PFA, Metro Railway
6. The CAO and PFA, COFMOW/New Delhi
7. The CAO(Const), MTP(R)/Mumbai
8. The CAO(MTP(R) Chennai
9. The Director, CAMTECH/Gwalior
10. The Director (a) IRIEN, Nasik, (b) IRICEN, Pune (c) IRIMEE, Jamalpur (d) IRISSET, Secunderabad
11. The Managing Directors RITES, IRCON, CRIS, IRFC, CONCOR, RVNL, DFCCIL, KRCL.
12. The Chairman-cum-Managing Director, Konkan Railway Corporation, New Delhi.
13. The Pay & Accounts Officer, Railway Board, Rail Bhawan, New Delhi.
14. The General Secretary, IRCA/New Delhi.
15. The Commissioner, Railway Safety, Lucknow.

PATROLLING OF THE RAILWAY LINES

Station Masters will see that the men come on duty sober and fully equipped, that their lamps are trimmed and filled with oil and that they leave for their patrol duty in time.

If a patrolman who is due to arrive at a station does not turn in time or does not turn up at all, the Station Master/Block hut-in-charge will advise Station Master/Block hut-in-charge at the other end of the block section of the absence of the patrolman and both Station Masters/Block hut-in-charges will issue caution orders to all trains entering the section until the patrolman from the other end of the "patrol-section" arrives at the station and reports that all is well.

1007. Equipment of Patrolmen – (1) Each patrolman shall be provided with the following equipment and such other, as may be prescribed by special instructions:

- (a) One staff.
- (b) Number plate 15 cm. Square (to be numbered consecutively from the beginning of each Permanent Way Inspector's length in white letters on black background).
- (c) 12 fog signals in a tin case.
- (d) Two tricolour hand signal lamps.
- (e) Protective clothing according to local dress regulations.
- (f) One match box.
- (g) Two red flags and one green flag (day patrol only).
- (h) Patrol book in a tin case.
- (i) One three cell Electric torch.
- (j) Whistle thunderer.
- (k) One haversack.
- (l) Three flare signals (fusees) on double/multiple lines, ghats, suburban and automatic block territories and one fusee on single line sections.

(2) Where patrolling is undertaken in pairs or stationary patrol consists of two men, the equipment need not be duplicated but the additional patrolman will be provided with an extra hand signal lamp, whistle thunderer and protective clothing.

1008. Selection of Patrolman – Intelligent, experienced and trustworthy men should be selected from the Permanent Gangs by Permanent Way Inspectors to work as Patrolmen and Watchmen,

preferably those who can read bridge and telegraph post numbers. Temporary substitutes should be appointed in their places to work for the gangs. Twice the number required should be selected to serve as relief, in case of illness, to provide for rest giver patrolman etc. The men selected from each gang should be sent to the Divisional Medical Officer for vision test and shall not be employed as patrolmen unless they have passed the requisite medical test.

1009. Certificate to be submitted by Permanent Way Inspector – The Permanent Way Inspector shall submit a certificate to the Divisional Engineer through Assistant Engineer a month in advance before the commencement of the monsoon that he has made all arrangements for monsoon patrolling and for watching vulnerable locations/ bridges and that the patrolmen and the watchmen have been made conversant with their duties, rules for the protections of the line and vulnerable locations in their beats. He will also submit to the Assistant Engineer a list of names of patrolmen and watchmen with their duties/locations assigned during the patrolling season.

1010. Duties of Patrolmen – (1) The duties of a patrolman shall be as follows :

(a) Walk to and fro over the beat in accordance with the chart pertaining to his "patrol-section" looking out for subsidence, slips, signs of erosion, trees blown across the track during storms or any other causes likely to endanger the safety of line. Bridges and their approaches should be especially watched.

(b) Apprehend damage to line when

(i) the flood exceeds danger level at any of the bridges.

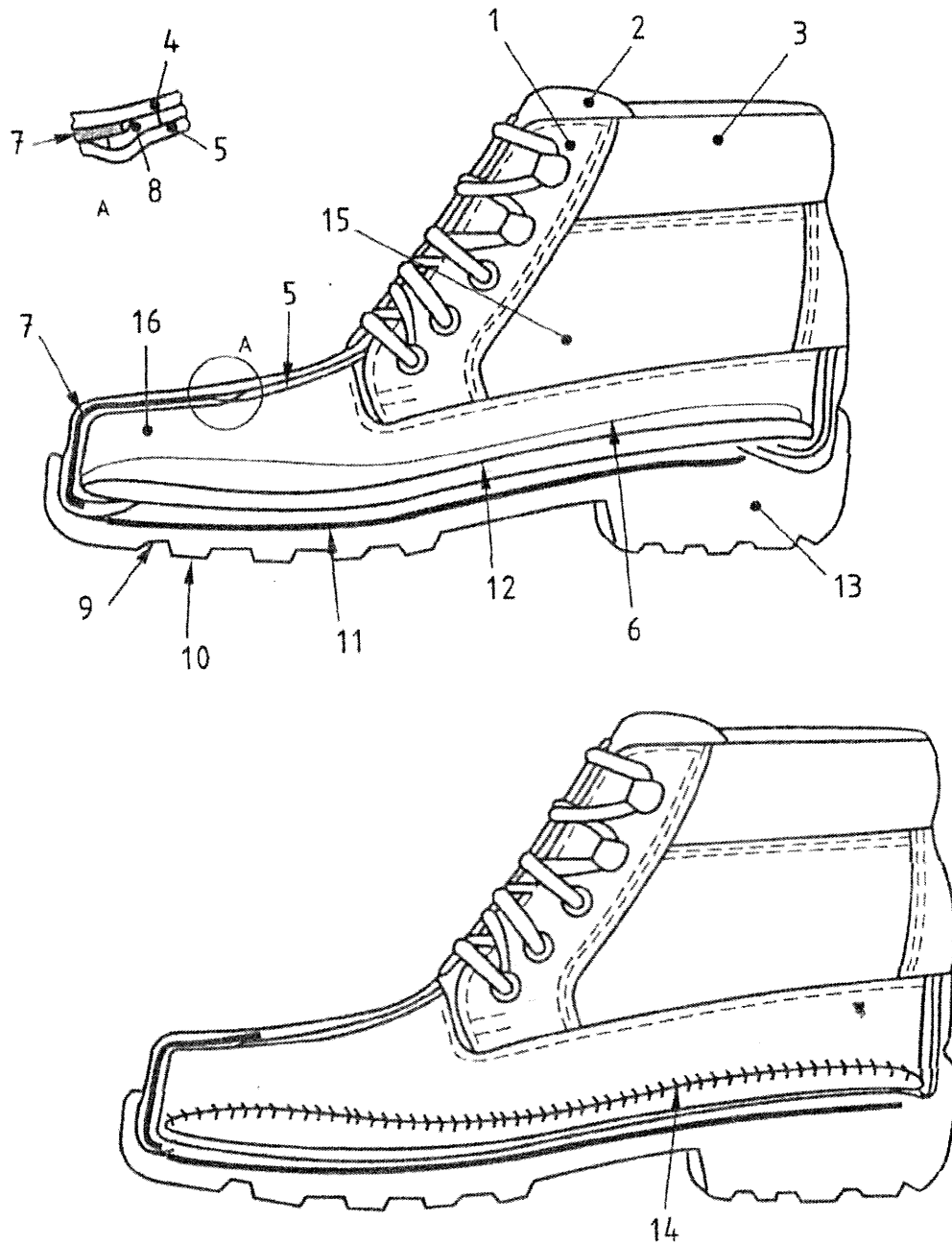
(ii) when there is damage to the protection work or on approaches even before danger level is reached.

(iii) the water on one side of the embankment is at a much higher level than on the other side.

(iv) when any obstruction such as a fallen tree is blocking the water-way of a bridge.

(v) the track shows signs of a settlement.

(c) Take immediate steps in accordance with **Para 1011** to stop trains when any portion of the line is likely to be rendered unsafe due to abnormal rain or flood or any other cause.

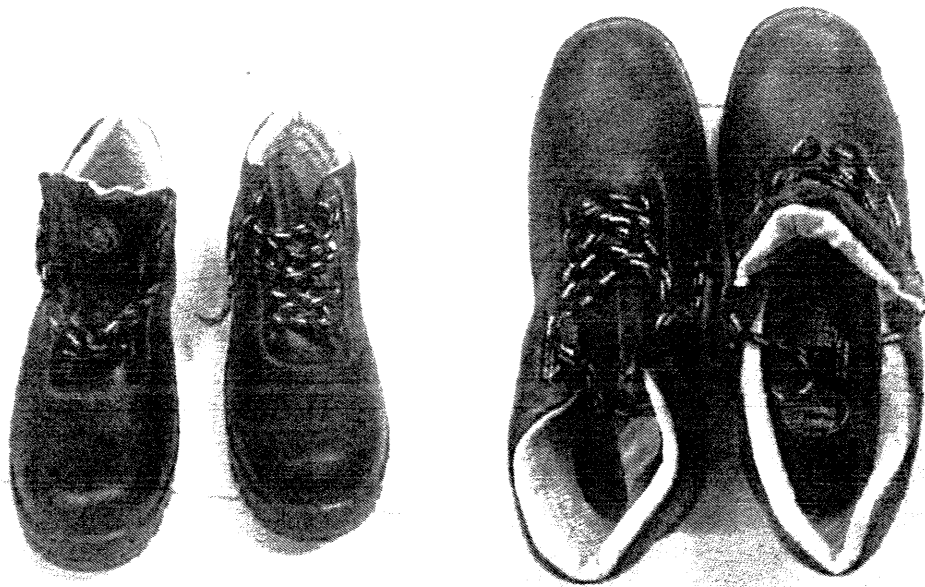


Key

1	Facing	6	Insock	11	Penetration-resistant insert
2	Tongue	7	Toecap	12	Insole
3	Collar	8	Edge covering, e.g. foam strip	13	Heel
4	Upper	9	Outsole	14	Strobel stitching
5	Vamp lining	10	Cleat	15	Quarter
				16	Vamp

Figure 1a) Parts of footwear of Strobelt construction

Ann-14w



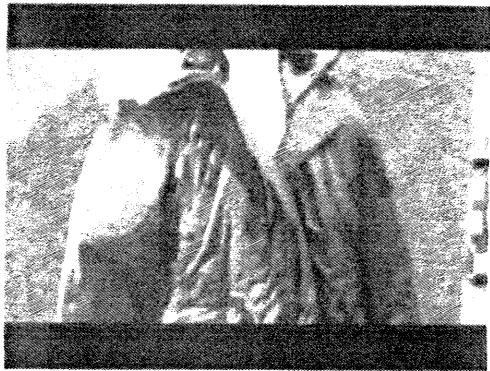
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GeM | Product Des...

GeM Government Marketplace

Products Services Bid/RA

HOME / PRODUCT DETAIL

coat ecc (aa)(aa-coat-ecc)

₹ 4,700.00

MRP: ₹ 7000.00

Category: coat extreme cold climate In coats and jackets

Coat ECC for armed forces used in extreme cold climate..

Availability: 890 In Stock Min. Qty. Per Consignee: 10

Product Id: 744887 Sold by: 1 Seller(s)

- Size - Small
- Components of Coat ECC - Coat ECC consists of three independent components i.e. Wind Cheater (Waterproof), Insulating Layer and Waist Coat (Sleeve less)
- Material of Wind Cheater - Three Layer Waterproof Breathable fabric, Dual Shade OG/ White
- Material of Waist Coat - Double Layer Bonded Polyester Fleece
- Test Report No. - on buyers demand

Buy Now

2000

Register Upto

13

(1) *concerned*
 (2) *also discuss my*
 (3) *Barbar*
 GOVERNMENT OF INDIA
 (RECEIVED) MINISTRY OF RAILWAYS
 (RECEIVED) RAILWAY BOARD

No. 2014/CE-II/Gen/PNM

New Delhi, dated: 02.03.2016

The Principal Chief Engineers
 TTA/All Zonal Railways

Sub: Equipments of Keyman (Para 169 of IRPMM).

Ref: This office letter of even No. dated 02.03.2016.

Hon'ble MR in his Budget Speech 2016 has announced that "We will also reduce the weight of the tools carried by them (Trackman/Keyman) while patrolling on foot through value engineering". This item has kept under 'C' initiative, the progress of which will be monitored by Board(ME) very fortnight.

Vide letter under reference above, a revised list of equipments to be carried by Keyman was advised. Also, the specifications of fish bolt spanner using alloy of low Carbon steel, Chromium and Vanadium having weight around 1.25 kg and a keyman tool kit to carry the equipments were circulated. Railways were requested to submit suggestions on the proposed list of equipments, spanner and keyman tool kit to standardized equipments. However, none of the Railway has offered any comment.

It has been decided that Zonal Railways shall arrange provide equipments to Keyman as listed below:-

- | | | |
|--------|----------------------------|-------------------------------|
| (i) | Red Flag | - 2 nos. |
| (ii) | Green Flag | - 1 no. |
| (iii) | Detonator | - 1 case having 10 detonators |
| (iv) | Check Rail clearance gauge | - 1 no. |
| (v) | Keying Hammer | - 1 no. |
| (vi) | Alloy Spanner D/E | - 1 no. |
| (vii) | Spanner Tubular | - 1 no. |
| (viii) | Fish bolt | - 2 no. |
| (ix) | Additional ERC and Liners | - 2 nos. |
| (x) | Rail closure | - 1 no. |
| (xi) | Tapered Gauge | - 1 no. |
| (xii) | Tapered Pin | - 1 no. |
| (xiii) | Material for grease | |
| (a) | Magnifying Glass | - 1 no. |
| (b) | Plain mirror | - 1 no. |
| (c) | Wire brush | - 1 no. |
| (d) | Emery Paper | |
| (e) | Jute and duster | |
| (xiv) | Keyman Diary | |

7) 1111- VI

Zonal Railways shall arrange to provide fish bolt spanner made of alloy of low Carbon steel, Chromium and Vanadium in lieu of conventional fish bolt spanner and keyman tool kit to all the keyman by 31.07.2016. For any clarification on the specifications of Fish bolt spanner and Tool kit, Western Railway may be approached.

The compliance shall be submitted by all the Zonal Railways by 31.07.2016. The Correction Slip to Para 169 of IRPWM will be issued on due course of time.

(Sd/-)
(Sd/-) T.Y.
Director/Genl Engr (P & S)
Railway Board

(16)
Special Spanner for fish plate bolts confirming to JUS : 4835 or equivalent

- Double open ended with 15° angle.
- Size 36 mm & 41 mm at either end.
- Length -- 680 mm (min) - 760 mm(Max)
- Manufactured by forging process. With black phosphate finishing.
- Heat treatment with controlled oil bath process. Hardness of final product : 380-400 BHN
- Approx. weight.: 1300 gm $\pm$ 5%
- Capacity to handle : 500 Nm Torque without breakage.

Probable Supplier List :

- 1) T.T. Enterprises 299/B Near New Telephone Exchange GIDC Makarpura vadodara-390010
- 2) A. P. Enterprise 323/B shop No.7 Vaikunth complex opp. Lucky restaurant GIDC Makarpura vadodara-390010
- 3) Chrome Clad Inc. 360 GIDC PorRamangamdi dist. Vadodara-391243

Warranty/Guarantee : 12 months

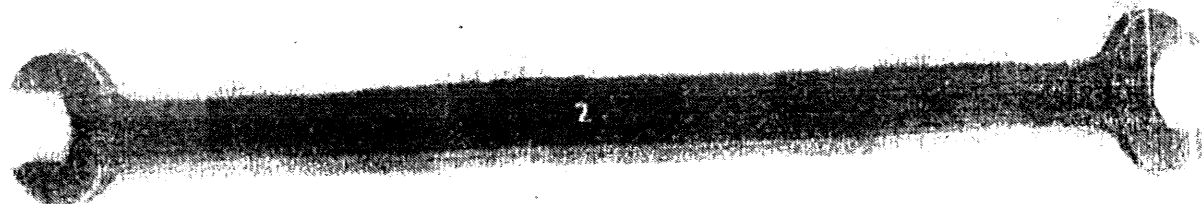
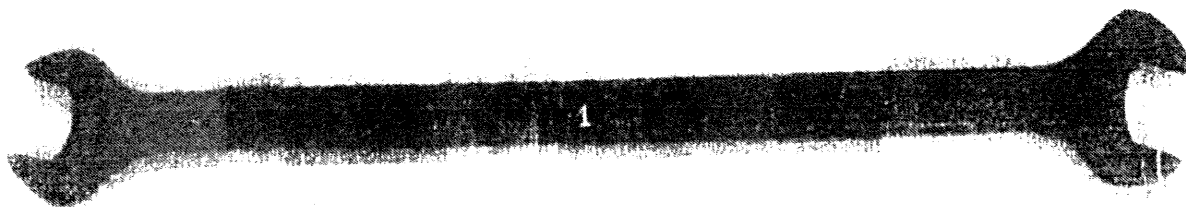


Fig. 1 Modified Spanner
Fig. 2 Conventional Spanner

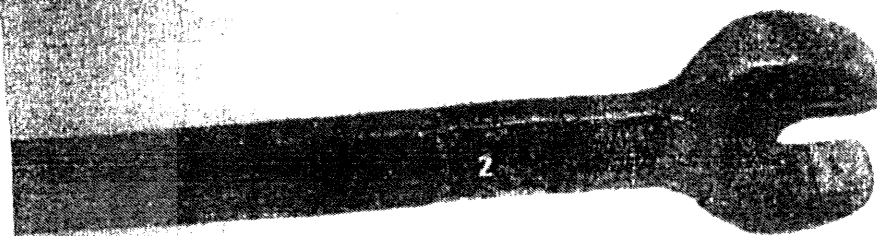


Fig. 1 Modified Spanner: with less weight and less head width.
Fig. 2 Conventional Spanner:

134

Annexure - II

Specification of Keyman's shoulder Tool Bag (Pathan Bag)

Sr. No.	Material	Specification
1	Cloth Light Weight	Laminated canvas 2 mm waterproof
2	Cloth thickness	2 mm
3	Dimension	Height – 50 cm, width 27 cm, breadth – 12 cm
4	White florescent / Radium indicator on the flap of bag	3M of USA or / Reflexive USA / Ireland or Avery Dennison of USA or Reflomap of Korea.
5	Threads (used in stitching)	3 PLY
6	Clip as switche in waist belt	PVC clip heavy type
7	Broad double strap Belts to handle and carry bag from shoulder and waist	SR Nibar 2 inches.
8	Thick leather bottom at base and sides upto 4 inches height	PU – 1M
9	Velcro (to hold flags and pockets)	Very High Quality
10	Pockets to keep each tool at nominated place	As per dimension below

Dimensions of pockets:-

Pockets No.	Dimension in inches.	For Keeping
1	7.5X8	Detonator
2	6 X 8	Keymen diary
3	7.5 X 3	Flags
4	7.5 X 13	Water bottle
5	7X8	Magnifying glass, plan mirror and clearance gauge
6	5.25X9.5	Filler gauge, rail closer and tapered pin
7	5.25X9.5	First aid box and emery paper

Note:

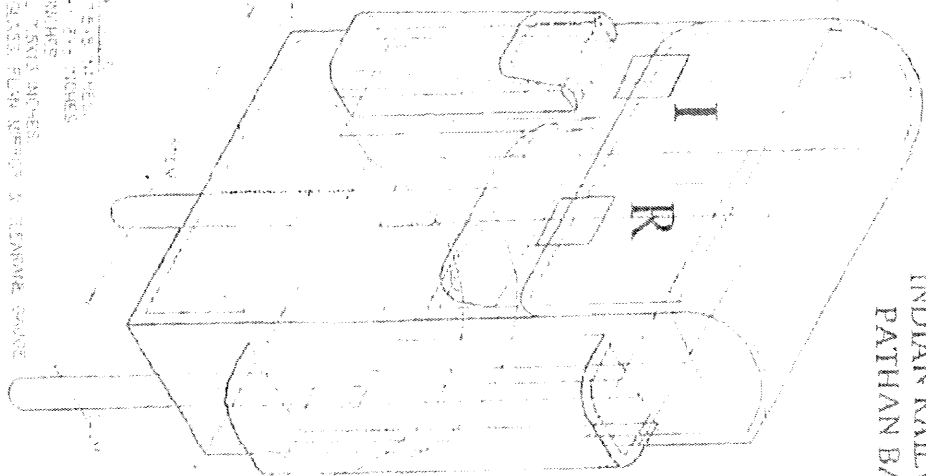
1. Pocket No. 1,2,3 & 4 are provided outside
2. Pocket No. 5, 6, 7, 8 are provided inside the bag.

A. S. D. 19/1/12

x x x

A. S. D. 19/1/12

INDIAN RAILWAY
PATHAN BAG



THE
WATER BUREAU HAS BEEN
PLACED IN THE
MAYOR'S OFFICE. THE WATER
BUREAU HAS BEEN PLACED
IN THE MAYOR'S OFFICE.
THE WATER BUREAU HAS
BEEN PLACED IN THE
MAYOR'S OFFICE.

Handwritten: *Handwritten: S. S. Jones*

~~SECRET~~
A-1
D/CET-1
Also known as
C/CET-1

भारत सरकार) GOVERNMENT OF INDIA
(रेल मंत्रालय) MINISTRY OF RAILWAYS
(रेलवे बोर्ड) (RAILWAY BOARD)

21-6-16
No. 2014/CE-II/GenI/PNM

New Delhi, dated 17.06.2016

1146
RBL
The Principal Chief Engineers
NR/All Zonal Railways

CE
Cost
to discuss for its implementation
Integrable
21/6
PCE
Sub: Tools and Equipments of P.way Gang

As per Para 151 of IRPWM, Every Mate shall ensure that the following tools and equipments are with him at the site of work :

- Level-cum-gauge, square, hemp cord, metre stick, keying and/or spiking hammer, fish-bolt spanner, 2 sets of H.S.flags, 12 detonators, marking chalk and Rail thermometer (2 H. S. lamps in the night)
- Sufficient number of shovels or phowrahs, beaters, crow bars, ballast forks or rakes, mortar pans or baskets and wooden mallet.

Para 309 (7) of IRPWM indicates that the P.way inspector shall arrange sufficient track gauges, gauge-cum-levels, spanners, keying and spiking hammers, augurs, crow bars, tommy bars, claw bars, grip gauges, cotter splitters, beaters, ballast rakes, wire claws, forks, wire brushes, ballast screens, mortar pans screening baskets, shovels, powrahs, rail thermometers, expansion liners, slotted fish-plates, rail closures, combination fish-plates, wooden blocks and wedges and all tools and equipment necessary for efficient execution of P.way works including that for rail cutting and rail drilling and mechanical tampers where used.

With the existence of PSC sleepers on almost all BG routes, Gangs are invariably doing the works of casual renewal, spot attention, cess repair, shallow screening, patrolling, etc. whereas the work of packing, deep screening, etc. are being done by Track machines. Also, with the technological advancement in the field of metallurgy, it is incumbent that the equipments being carried by Trackmen are light in weight without affecting the basic functionality of equipment.

The development of improved design tools without affecting functionality has been undertaken by various Zonal Railways and put on limited trials. Based on inputs, following improvement in Gang tools is decided to be adopted:

- The specification for fish bolt spanner using alloy of low carbon steel, chromium and vanadium developed by Western Railway has already been circulated.

2. Crow bar made up of low Carbon alloyed steel developed by Northern Railway (Weight approx. 7 kg).
3. Mortar Pan of light steel developed by West Central Railway (Weight approx. 1 kg)

The design/drawing of other tools and equipments will remain same as per practice on Zonal Railways

It has also been decided that Zonal Railways shall rationalize the list of tools and equipments. In view of introduction of mechanized maintenance, the tentative list and scale is enclosed in Annexure. However, Zonal Railways shall finalize the same at their level depending upon extent of mechanization and nature of inputs required in track.

The compliance for implementation of above shall be submitted by all the Zonal Railways by 31.12.2016. The correction slip to relevant para of IRPWM will be issued in due course of time.


17/6/16
(Pankaj Tyagi)
Director/Civil Engg.(PIg)
Railway Board

Annexure

Gang Tools	Prevalent Scale	Modification in Design	Tentative Revised Scale
Crow Bar	1 Per Trackman	Only Plain crow bar with modified design	As required. (4-5 Crow bar per Gang i.e. 1 per 2 Trackmen shall be adequate).
Mortar Pan	As required	Light weight improved metallurgy	As required. (1 per 2 Trackmen shall be adequate).
Fish Bolt Spanner	As required	Made up of alloy steel	As required. (3 nos. /gang shall be adequate).
Rail Tongs	As required	Heat insulated rubberized grip may be provided to existing one	Required only when rail replacement to be done. (6 nos per gang shall be adequate)
H.S.Lamp	As required	Rechargeable with tricolor charges	As required. (5 nos per gang shall be adequate)
Beaters	1 Per Trackman	No change	As required. (5-6 Beaters per gang i.e. 1 Per 2 Trackmen shall be adequate).
Rake Ballast	1 Per Trackman	No change	As required. (5-6 rake ballast i.e. 1 Per 2 Trackman shall be adequate).
Wooden Mallet	As required		Not required
Road Rammer (Durmut)	As required		Not required
Pick axe	As required	No change	As required. Limited use. (2 nos. /gang shall be adequate).
Shovel	As required	No change	As required. (4 nos. per gang shall be adequate).
Phowrah	1 Per Trackman	No change	As required. (4 nos. per gang shall be adequate).
Wire Basket	1 Per Trackman	No change	As required. (4 nos. per gang shall be adequate).
Hand Signal Flag	As required	No change	As required. (03 sets per gang shall be adequate)
Banner Flag	As required	No change	As required. (2 sets per gang shall be adequate)
Keying and spiking Hammer	As required	No change	As required. (2 nos. per gang shall be adequate)
Whistle Thunderers	As required	Gang Hooters to be provided.	1 per gang

Keyman Tool Kit Bag :

- (a) SCR Practise: Canvas Tool bag : The haversack is replaced with flexible user friendly canvas Tool bag with multi-pockets for keeping Tri-color lights, spanners, foldable staff and other equipment conveniently, separately and can be picked up quickly in case of emergency.



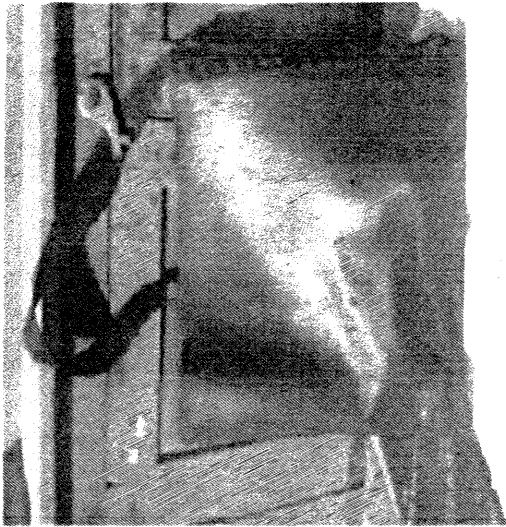
(b) Tool Kit Bag developed by Pune Div' CR:

Keyman is supposed to inspect track on foot once a day in either direction. He has to carry various tools weighing about 13Kg and to perform various tasks like tightening and replacement of loose bolts, keys etc.

Conventionally ,key men carry all these tools in a bag known as jhola (ladder bag) which has one belts too carry on his one shoulder with poor ergonomics and space utilization, tools are kept in haphazard manner in his jhola (ladder bag).Keyman has to search for the tools every time when needed. More ever these bag obstructs his working with dangling of bag one side obstructing free movement of one end.

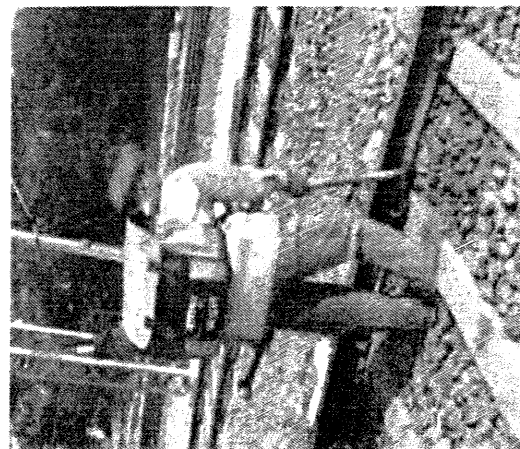
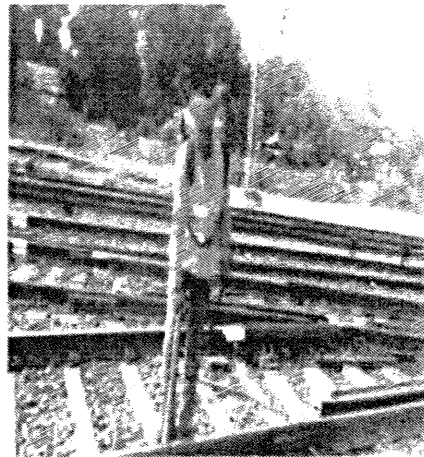
Nagpur division introduce new light weight keyman bag for keyman to take early action in case of emergency and all the aspects of railway

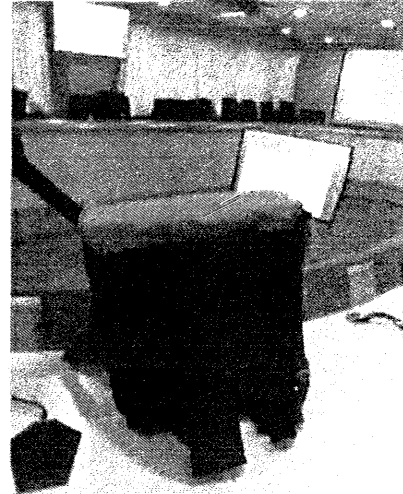
inspection and maintenance. This bag will help keyman in completing his job efficiently and comfortably .



OLD TOOL KIT – JHOLA TYPE

NEW TOOL BAG, MULTI POCKET

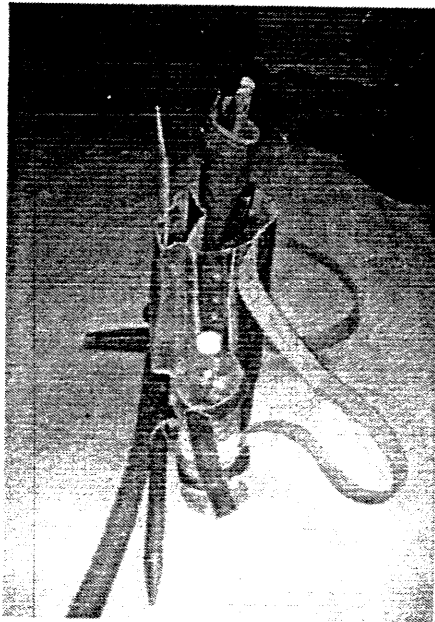




351

Innovative changes in Keyaman Bag

The total weight of instruments taken by Keyman as on date is 10.964 Kg. The details of modified bag and comparison with old bag is as under :-



OLD BAG



NEW BAG

DETAILS OF KEY MAN BAG

Description	Old Bag	New Bag
Length	300 mm	365mm 420 mm
Width	50 mm	165mm
Material	Leather	Matte nylon 1680
Thickness	3 mm	5 mm
Height	365 mm	365mm
Colour	Brown	Black & Orange
Pockets and bellcrow arrangements	Nil	11 pkt & 4nos.
Other's	Only shoulder belts is provided.	CANVOS FOR LINNING, FIBRE USED FOR STIFFNESS CUSHION FOR BACK SIDE FOR COMFORT, SAKING BELTS, SHOULDER BELTS WAIST BELTS ARE ALSO PROVIDED.

NEW BAG IS MOR COMFERTABLE THAN OLD BAG.

DESCRIPTION: - KEYMAN'S BAG TO CARRY KEYMAN TOOLS.

POCKETS NO.	DIMENSION IN INCHES. HEIGHT X WIDTH X BREADTH	EXTERNAL OR INTERNAL	FOR KEEPING
1.	6.5 X 1.5 X 6.5	EXTERNAL	KEYMAN DIARY.
2.	6.5 X 1.5 X 2	EXTERNAL	ROLL WIRE BRUSH.
3.	6.5 X 1.5 X 2	EXTERNAL	GREASE BRUSH.
4.	6 X 1.5 X 7.5	EXTERNAL	EMERY PAPER AND FILLER GAUGE.
5.	12 X 2 X 5	SIDE	WATER BOTTLE.
6.	12 X 2 X 5	SIDE	RED AND GREEN FLAG.
7.	VELCROW 5" BOTH SIDE	INTERNAL	DETONATOR BOX.
8.	6 X 2.5 X 6	INTERNAL	RAIL CLOSER.
9.	2 NOS VALCROW 2.5" BOTH SIDE	INTERNAL	TWO NOS FISH BOLT.
10.	8 X 3.5 X 3.5	INTERNAL	WIRE BRUSH.
11.	6.5 X 1.5 X 2	INTERNAL	P/CLIP.
12.	SUFICIENT SPACE	INTERNAL	TIFFIN BOX, RAIN COAT etc.
13.	6 X 1.5 X 2	EXTERNAL	LINER.
14.	6 X 1.5 X 2	EXTERNAL	LINER.

DETAILS OF KEYMAN'S BAG

Keyman's hammer to facilitate day to day working of keyman as per specification and sketch and specification allowed.

SPECIFICATION OF BAG

LENGTH :- 14.5"

WIDTH :- 6.5"

HEIGHT :- ~~14.5"~~ 16.5"

MATERIAL :- 1. MATTE NYLON – 1680. BLACK, RED AND ORANGE COLOUR.

2. CANVOS FOR LINNING.

3. FIBRE USED WHERE AS REQUIRED FOR STIFFNESS

4. RUBBER BOLTS AT BOTTAM.

5. CUSHION FOR BACK SIDE FOR COMFORT.

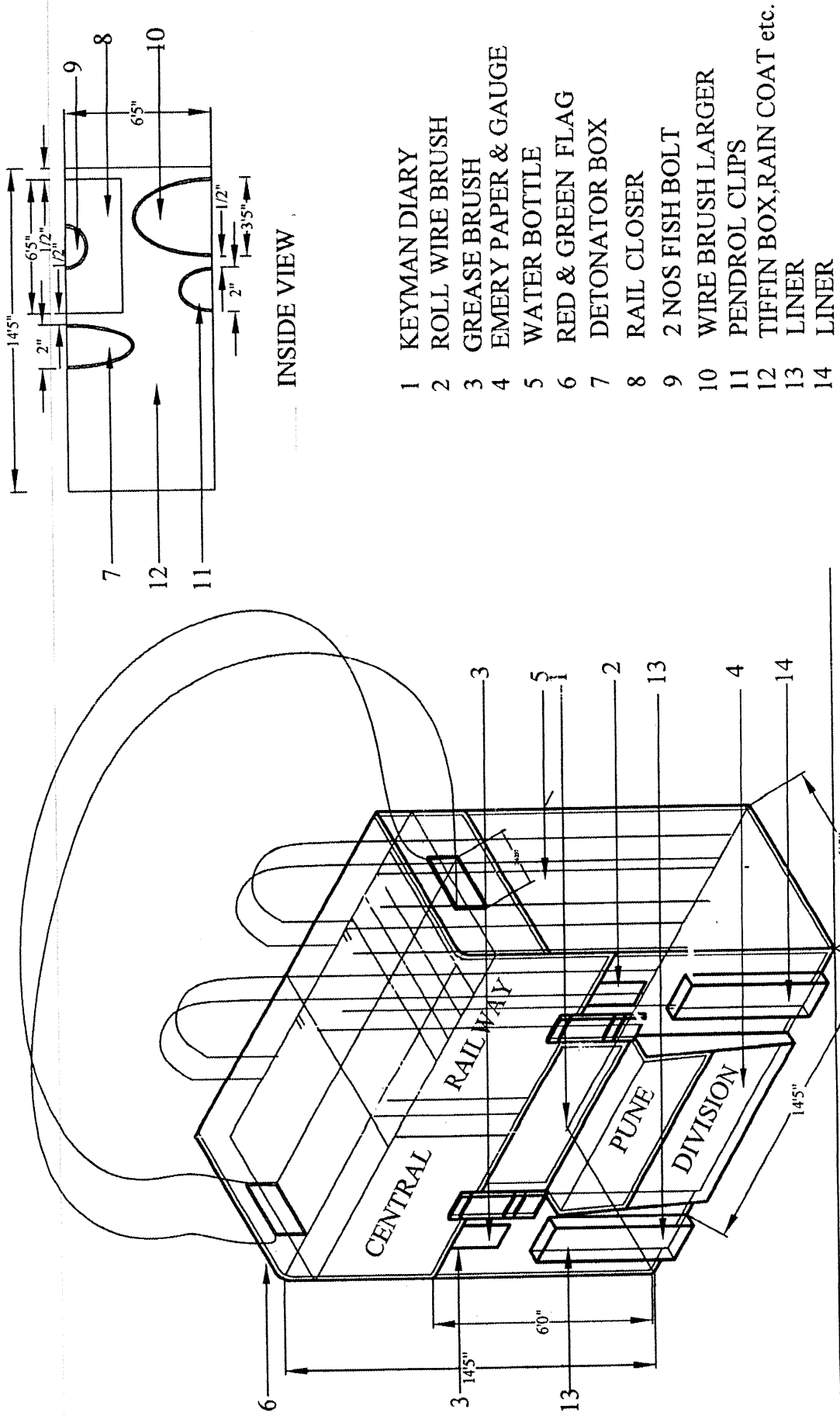
6. SAKEING BELTS (WITH CUSHION) ARE PROVIDED

7. SHOULDER BELTS ARE ALSO PROVIDED.

8. WAIST BELTS ARE ALSO PROVIDED.

38

KEY MAN'S BAG DETAIL DRAWING

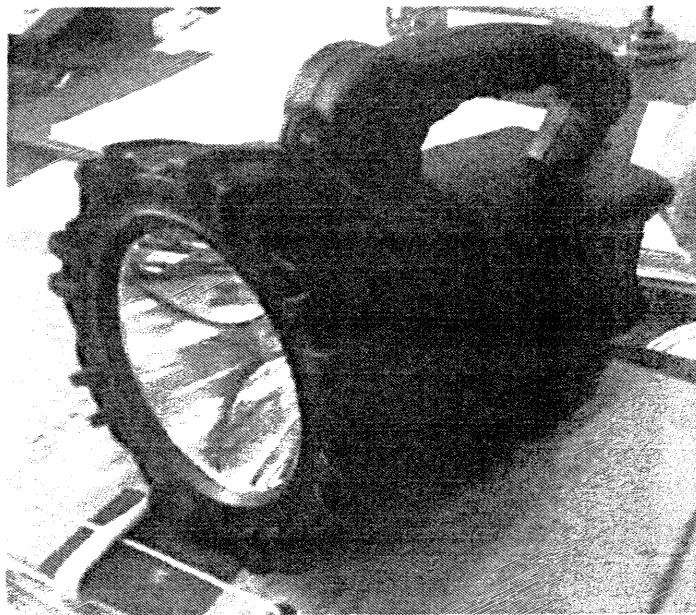


NR

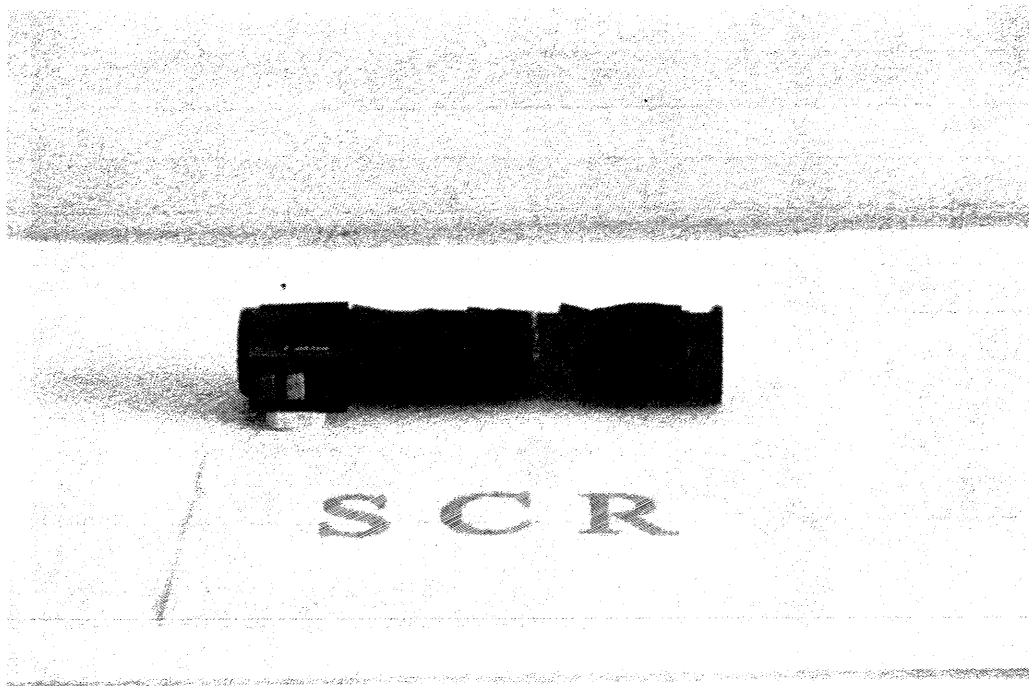
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Technical Specifications of Tri-colour signal light

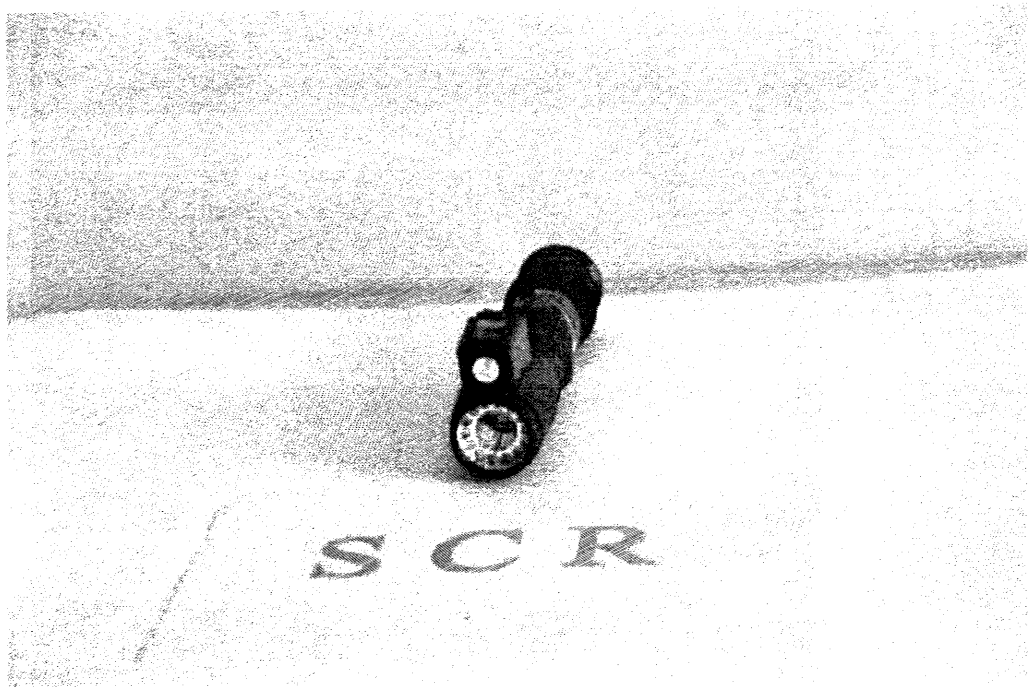
S.No.	Description	Details
1	LED	5 White/5 Red/5 Green
2	Range	800 mtr +/-10%
3	Colour	White/Red/Green
4	Fixture Dimension(L/H/D)	210/160/120mm (Approx.)
5	Front Glass	Toughened glass
6	Body Material	ABS (Unbreakable body)
7	Weight	1.00 Kg +/- 10%
8	Output Voltage current	8.5V/500mha
9	AC frequency	50/60Hz
10	Battery capacity	4V/4.5Ah
11	Battery type	Lead Acid maintenance free
12	Illumining dimming	8 hr +/- 10% countinously minimum
13	IP Rating (Battery)	IP-65

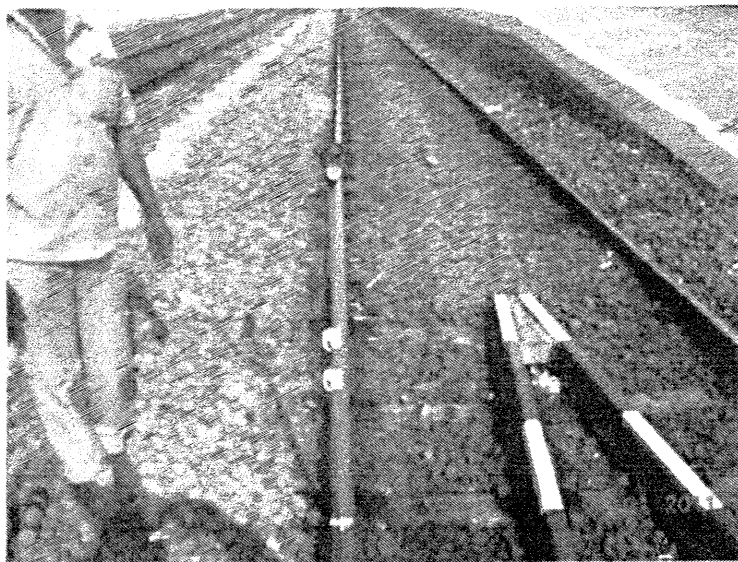
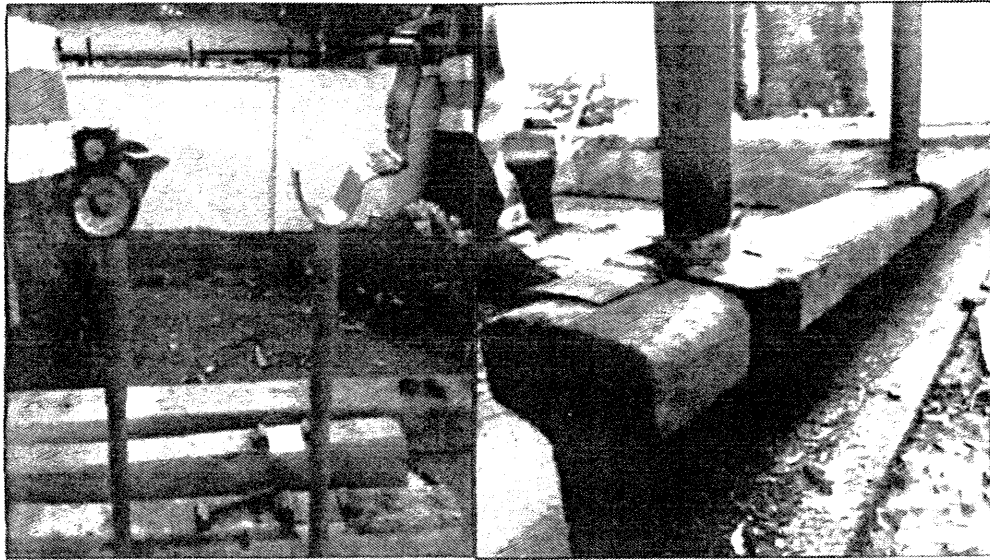


Developed by NR.



3 CELLED LED TORCH LIGHT





An-1x



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

No. 2016/CE-I/GNS/4pt.

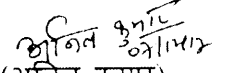
New Delhi, dated 07.12.2017

**General Managers,
All Indian Railways.**

विषय :- Payment to the Track Maintainers deputed for night patrolling duties, for purchase of dry cell - PNM/NFIR Agenda Item No. 44/2016.

NFIR has raised the issue of revision of amount being given to the Track Maintainers deputed for track patrolling duties during night for purchase of dry cell battery. The matter has been considered by Board (ME & FC) and it has been decided that all track maintainers deputed for night patrolling shall be paid @ Rs 150 per month alongwith their salary towards purchase of dry cell, wherever rechargeable torches have not been provided.

2. This issues with concurrence of the Finance Directorate of the Ministry of Railways.


(अनिल कुमार)

निदेशक सिविल इंजी(जी)/रेलवे बोर्ड
[Rly no. 030-47598. Mob (CUG)-9717647611].

No. 2016/CE-I/GNS/4pt.

New Delhi, dated 07.12.2017

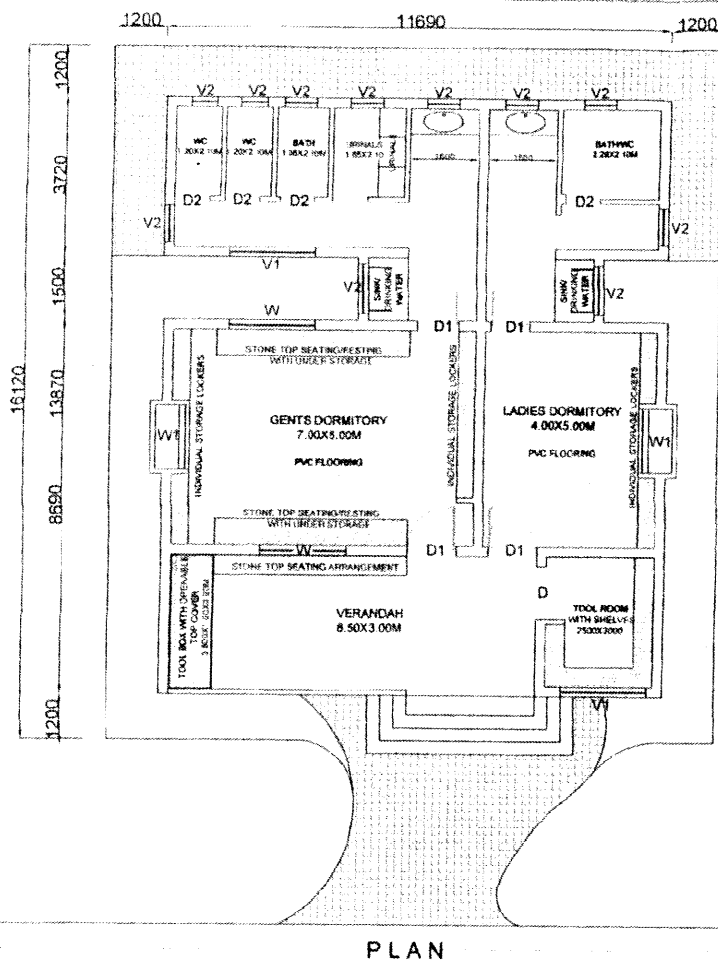
Copy forwarded for information to:

- (i) PFAs, All Indian Railways.
- (ii) Principal Chief Engineer, All Indian Railways.
- (iii) Dy. Comptroller and Auditor General of India (Railways), Room No. 224. Rail Bhawan, New Delhi.



For Financial Commissioner/Railways

MODEL GANG TOOL ROOM CUM REST ROOM



JOINERY:

1) DOOR - D : paneled door	- 1.20x2.10M
2) DOOR - D1: paneled door	- 1.05x2.10M
3) DOOR - D2: UPVC door	- 0.80x2.10M
4) WINDOW-W: UPVC	- 1.80x1.20M
5) WINDOW-W1: UPVC	- 1.20x1.20M
6) VENTILATOR-V1: UPVC	- 1.80x0.45M
7) VENTILATOR-V2: UPVC	- 0.75x0.45M

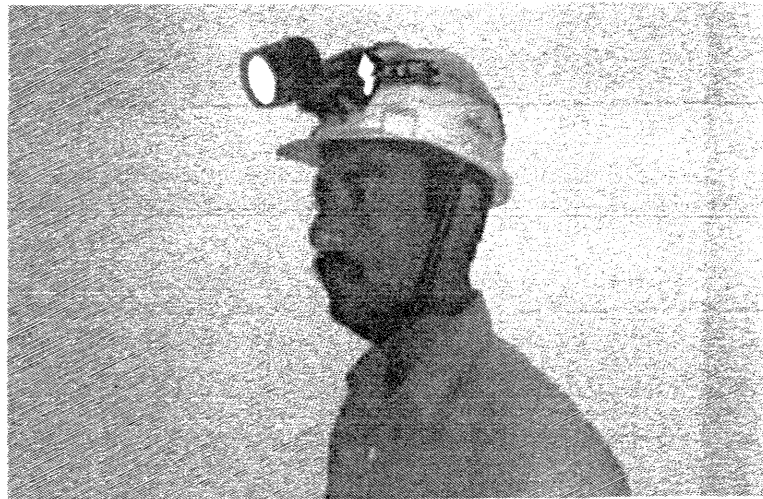
NOTE: SOLAR LIGHTING OF ADEQUATE CAPACITY
MAY BE PROVIDED

AREA STATEMENT:

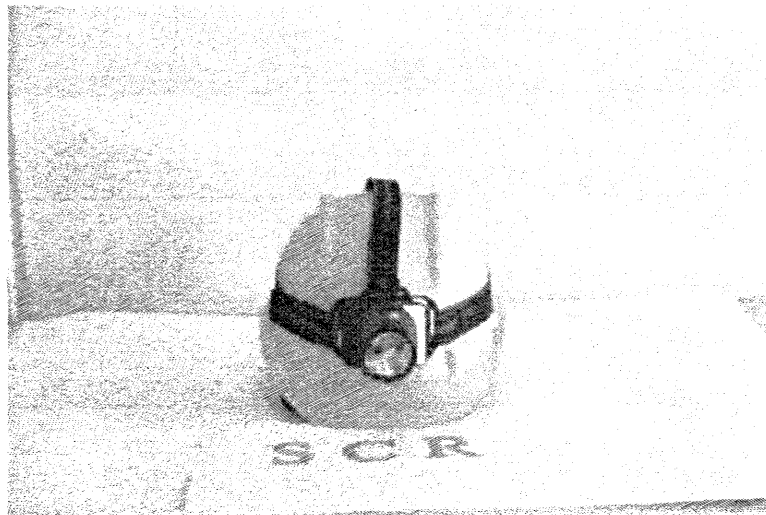
1) GENTS DORMITORY	- 96.00 SQM
2) LADIES DORMITORY	- 59.00 SQM
TOTAL	155.00 SQM

Protective helmets with miner's light

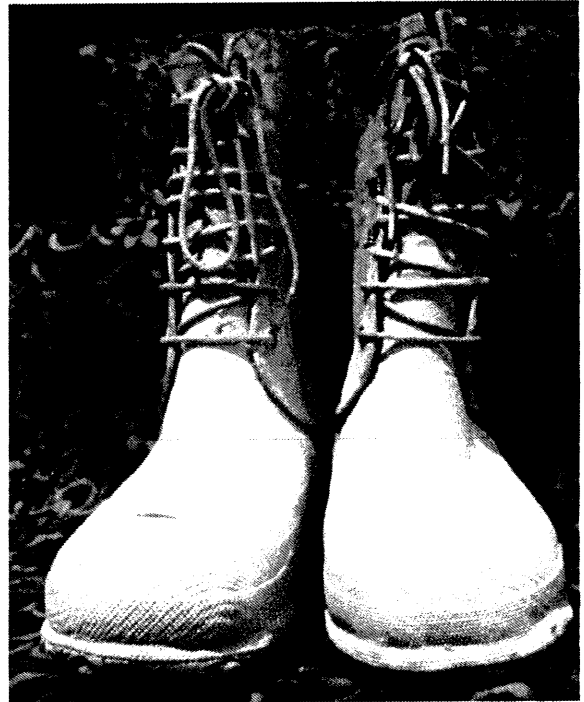
In addition to 3 cell electrical torch lights, miner's helmet with built in head light and having flexibility for rotation is provided. Which enables the Night patrolmen to walk freely and also both the hands are free while attending failures. These rechargeable torch lights fixed to helmet are required to be renewed once in a year and helmet for 2 years.



Miners helmet with head light for patrol man



SNOW BOOT for Sub Zero/Extreme Cold areas



Snow Boot Picture as sent by Sr DEN C FZR

(Approx Price Rs 1700 each pair)



SOUTH CENTRAL RAILWAY

Headquarters' Office
Works Branch
Secunderabad

No. 563/1/141/TRACK/2018-19

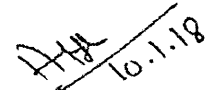
Dated: 10.01.2018

ED/CE (P)
Rly.Bd., New Delhi

Sub: Special report on 'RAKSHAK' - Reg.

A special report on 'RAKSHAK' is enclosed for your ready reference.

Encl: as above


(AKSHAY KUMAR JHA)
Chief Track Engineer

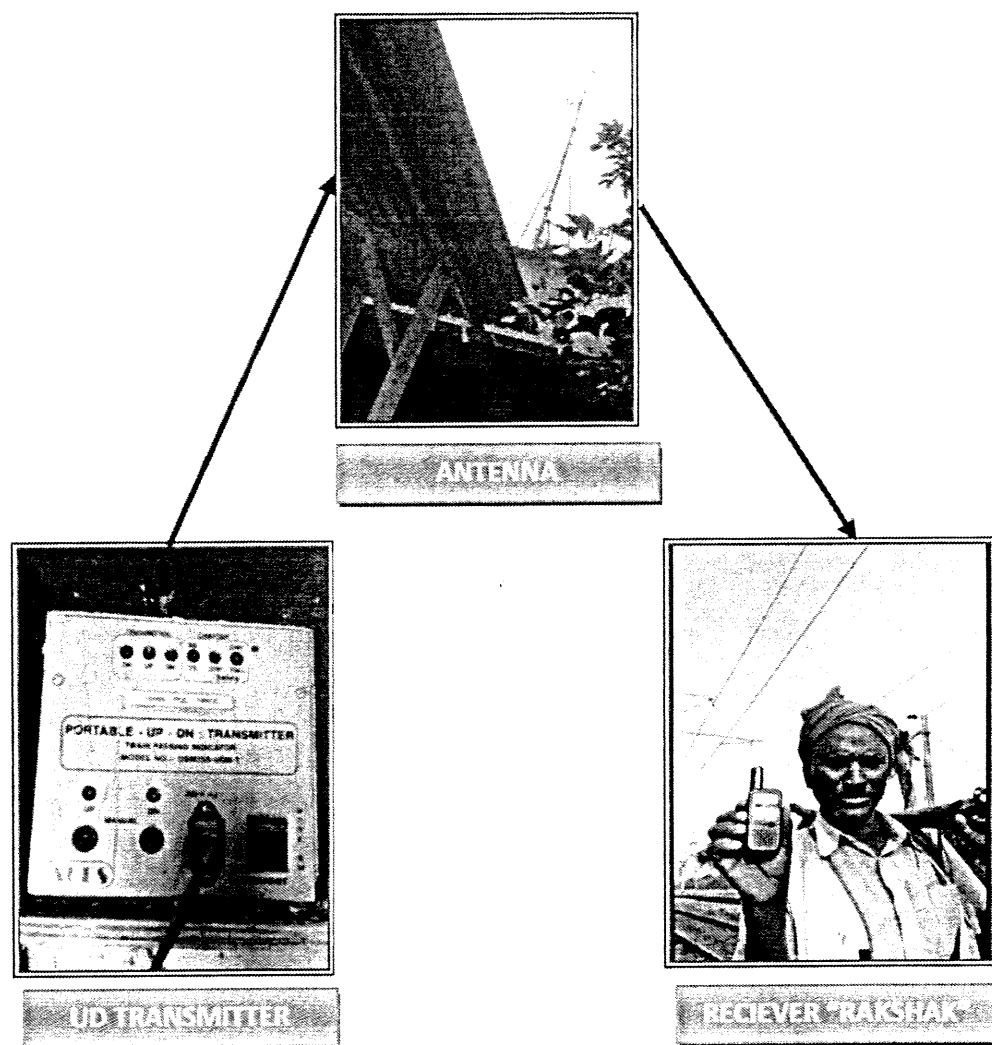
C/- ED/Transformation (Civil)/Rly.Board, New Delhi



SPECIAL REPORT ON
RAKSHAK

SOUTH CENTRAL RAILWAY
SECUNDERABAD

RAKSHAK SYSTEM



S.No.	Description	Page No.
1.0	Executive Summary	3-4
2.0	Special Report on Trial and Implementation of RAKSHAK on Secunderabad Division of S.C.Railway.	5-8
3.0	Schematic Diagram of Signal Transmission and Reception in a typical block section and Google Map	9-10
4.0	Approximate cost of provision RAKSHAK	11
5.0	Performance Report	9 Page Annx.

1.0 EXECUTIVE SUMMARY ON RAKSHAK

1.1 **Introduction:**

RAKSHAK is a wireless safety warning system for Railway Workforce working along the Railway track regarding the approaching trains. For this purpose, coded digital signal is transmitted to indicate approaching trains. Signal strength needs to be strong enough to be detected and decoded by the receiver under "Line-of-Sight" conditions. M/s. ACES Enterprises, Mumbai has developed above system.

1.2 **Trials and installation of system:**

On Secunderabad - Kazipet section of Secunderabad Division between Pindial (PQL) – Naskal (NSKL), Naskal (NSKL) – Ghanpur (GNP) and Ghanpur (GNP) - Ippuguda (IPG) (24 km stretch) trial was conducted from 10-12-2010 to 18-06-2011. Subsequently, on single tender basis work was awarded to M/s. ACES Enterprises, Mumbai for above section in Aug, 2012 with installation period of one month and maintenance period of 12 months which expired on 22-09-2013.

1.3 **Brief details of equipments & Functioning:**

1.3.1 **Equipment Details**

The system consists of two parts.

- (i) Portable UP/DN Transmitter
- (ii) Digital Signal Receiver

Transmitter Unit is normally placed in station and Antenna for this Unit is mounted at substantial height in free air and connected to transmitter through suitable RF cable.

Transmitter Unit consists of

- Digital Signal Modulator
- Built in 12V/7AH Battery
- Antenna with cable
- Built in Battery Charger

Above product is called "UD Transmitter"

1.3.2 Functioning: Transmitter gets a feed regarding taking off of Last Stop Signal (LSS) from Relay Operation but apart from getting feed through a cable there is no interference to Relay room operation. Digital Signal Receiver Unit is available with gang man/patrolman/Trackman working along Railway track. This product receives signal (UP/DN) as per trigger transmitted by "UP/DN Transmitter" and provides visual display (LED "UP" – and/or "DOWN") at specified interval, audible buzzer and vibrations (in the beginning only) the moment last stop signal is taken off. When train hits LSS signal LED visual display is stopped. During the period when receiver (RAKSHAK) does not receive any signal from transmitter in uncovered patches the equipment gives two beep/buzzer without LED display and Vibration after every 60 seconds (approx).

1.3.3 Frequency: This System works at 160.450 MHz carrier which is within the allotted bandwidth to Railways (150-170 MHz).

1.4 **Performance:**

"RAKSHAK" protection system for patrolmen/trackmen on Secunderabad Kazipet Section between Pindial – Naskal – Ghanpur – Ippuguda Section in stretch of 24 km (both UP & DN Lines) found to be very useful for getting advance information regarding both UP & DN approaching train by way of LED indication along with audible buzzer and vibration.

The RAKSHAKs have added additional safety for the Patrolmen, Keymen and Gangs working on the track. *There was not a single incidence of run over cases after introduction of Rakshak, and interfering with the relay working due to this connection in the relay room.* The performances of all the Rakshaks have been found very satisfactory and the results were found encouraging.

1.5 Sanctioned works of RAKSHAK (Aler (ALER) –Pembarti (PBP) –Jangaon (ZN) –Yasantapuru (YSPM) –Wangapalli (WP)):

The work of RAKSHAK devices for 48 km (252/0-300/0) under SSE/P.Way/ALER in above mentioned stretch of Secunderabad – Kazipet section is sanctioned and Tender finalized. Currently, Wireless possession certificate (WPC) is under process by Sr.DSTE/Tele/Secunderabad, which is expected shortly after which agency will take up the work.

1.6 Current status of RAKSHAK installed on 300/0 to 324/0 on Ippaguda-Pindial station:

The system was not covered by AMC and due to maintenance issues it had gone defective. However now asset has been brought under AMC by OEM M/s. ACES Enterprises and maintenance has been taken up recently by firm M/s. ACES Enterprises and system is functioning properly.

1.7 Approximate Cost: The approximate cost of RAKSHAK system considering life cycle of about 4 to 5 years is about Rs.50,000 per km/per year including yearly cost of WPC license fee.

1.8 Recommendation:

RAKSHAK is very useful for getting the advance information regarding approaching train to Trackmen/Patrolmen/Other Officials. *However, there is need to go for AMC with OEM's for maintaining the system on a continuous basis for entire life cycle of equipment.*

2.0 SPECIAL REPORT ON TRIAL AND IMPLEMENTATION OF RAKSHAK ON SECUNDERABAD DIVISION OF S.C.RAILWAY.

2.1 Objective of Project:

Safety is the prime aspect on Indian Railways and being monitoring at all levels. But it is quite essential to take Safety Measures for the staff working on track like Trackman, Key man, Monsoon/Winter patrol man who are monitoring safety of track from time to time and trolley inspections officials. **In order to mitigate such problems Very High Frequency (VHF) based approaching train warning system developed called as "RAKSHAK" and introduced between Pendial - Nashkal - Ghanapur - Ippaguda stations of Secunderabad – Kazipet sections of Secunderabad division on S.C.Rly.**

The product have undergone rigorous tests between Pendial - Nashkal - Ghanapur – Ippaguda block sections of SC-KZJ section to check the efficiency of this system the trials have been conducted during the period 10.12.2010 to 18.06.2011 and the performance of the equipment was very much encouraging . Further with the approval of HQ trial was extended by one more year duly warding a single tender to M/s ACES enterprises Mumbai for the installation of 4Nos Digital signal modular portable UP/DN Transmitters and 64 nos Digital signal receivers which includes installation period for one month and maintenance period for 12 months which ended on 22.09.2013.

This project had been conceived with the idea of providing Wireless safety warning system for the Railway work force working along the Railway tracks about the approaching trains. For this purpose coded signal is transmitted to indicate approaching train. Signal strength should be strong enough to be detected and decoded by the receivers under LINE OF SIGHT conditions.

The system consists of two parts

- i) Portable UP/DN Transmitter
- ii) Digital Signal Receiver-RAKSHAK

2.2 Technical Brief of the System

2.2.1 Portable UP/DN Transmitter

This is a transmitter unit which will be normally placed in the station or IB hut. Antenna for this unit will be mounted at substantial height (10-15 m) in free air and connected to transmitter through suitable RF cable. This system works at frequency 160.450 MHz which is within the allotted band width to Railways 150MHz to 170MHz. This transmitter is connected to Relays pertaining to operation of advance starter signal and works in a manner detailed below:

- a) ***Whenever LSS is taken off transmission unit transmits the signal to Digital receiver and it will decode the same in to VISUAL (LED "UP"AND / OR LED "DOWN"), AUDIBLE (Buzzer) and VIBRATIONS indication depending on type of signal received.***

- b) The moment train crosses the LSS, transmission of signal ends as it indicates that train entered into block section and staff to be alert until train passes.
- c) The LED light, buzzer and vibration will be different for both UP and Down lines.

Transmitter consists of :

- Digital Signal Modulator (DSM 25S)
- Built in 12V/7AH Battery
- Antenna with cable
- Built in Battery charger

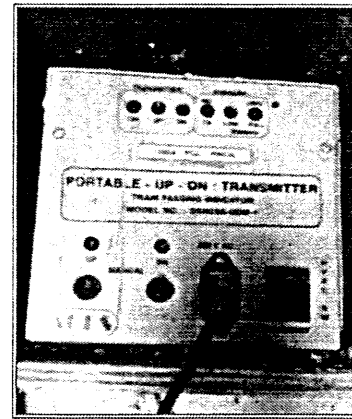
This product will be referred to as "UD" Transmitter"

2.2.2 Digital Signal Receiver:

This is a small receiver which will be available with the Gangmen/ Keyman /Patrolmen working along the Railway track. Here after this product will be referred to as "RAKSHAK"

This product has following features.

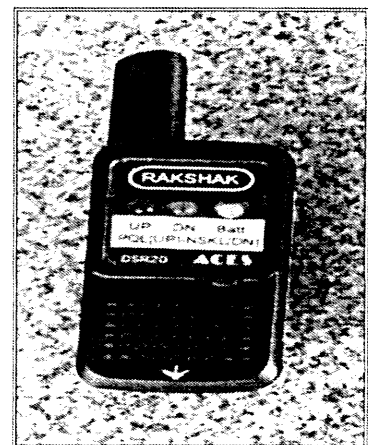
Receiver signal (Say UP/DN) as per Trigger will be transmitted by UD TRANSMITTER approximately once every 20 seconds.



UD TRANSMITTER

This received signal is decoded by every RAKSHAK between two stations that is available within "LINE OF SIGHT" condition and coverage distance. RAKSHAK will then provide VISUAL (LED "UP" AND / OR LED "DOWN"), AUDIBLE (Buzzer) and VIBRATIONS indication type of signal received. The three different methodologies adopted to convey the indication of approaching of train will definitely be conveyed to the Gangmen/Patrolmen/Trackmen.

2.2.3 This system works at frequency 160.450 MHz which is within the allotted band width to Railways 150MHz to 170MHz viz.,



RECIEVER "RAKSHAK"

2.3 WORKING OF RAKSHAK DEVICE:

- RAKSHAK will receive transmitted signal within the "LINE OF SIGHT" condition & coverage distance.
- RAKSHAK will give respective LED indication along with Buzzer & Vibration to suggest type of signal received.
- To indicate "UP" condition
 - "LED (UP Blue)" will Blink, "Buzzer" will give beep for 3 times & "Vibrator" will vibrate for 3 times of 1 second duration each.
 - After which, Buzzer and vibrator will stop but LED will continue to blink for every 20 sec or till the UP signal is put ON.
- To indicate "DN" condition,
 - "LED (DN Yellow)" will Blink, "Buzzer" will give beep (long Beep) & "Vibrator" will vibrate for 1 time of about 3 seconds duration.
 - After which Buzzer and vibrator will stop but LED will continue to blink for every 20 sec or till the DN signal is put ON.
- IN-RANGE
 - When Rakshak is able to receive Transmitted "RANGE" signal (within Range)
 - both "UP" & "DN" LED will blink twice without any Buzzer or Vibrate for every 60seconds.
- OUT OF RANGE
 - When Rakshak is not able to receive Transmitted "RANGE" signal (Out of Range) only two beep of Buzzer sound will come without any LED or Vibrate after every 60 seconds.
- "Low Bat" & Battery Charging" status is indicated by LED.
- To switch OFF the RAKSHAK the ON-OFF switch has to be kept pressed for about 5 sec Only 2 buzzer beeps will be heard without any LED or Vibrations while equipment switches off.
- Equipment used :
- 64NO.s of digital receivers supplied for four block section, 16 Nos. for each station .

The Transmitter unit at each station will be normally placed in the station manager Room. Antenna for this unit will be mounted at substantial height in free air on antenna Tower and connected to Transmitter through suitable RF cable.

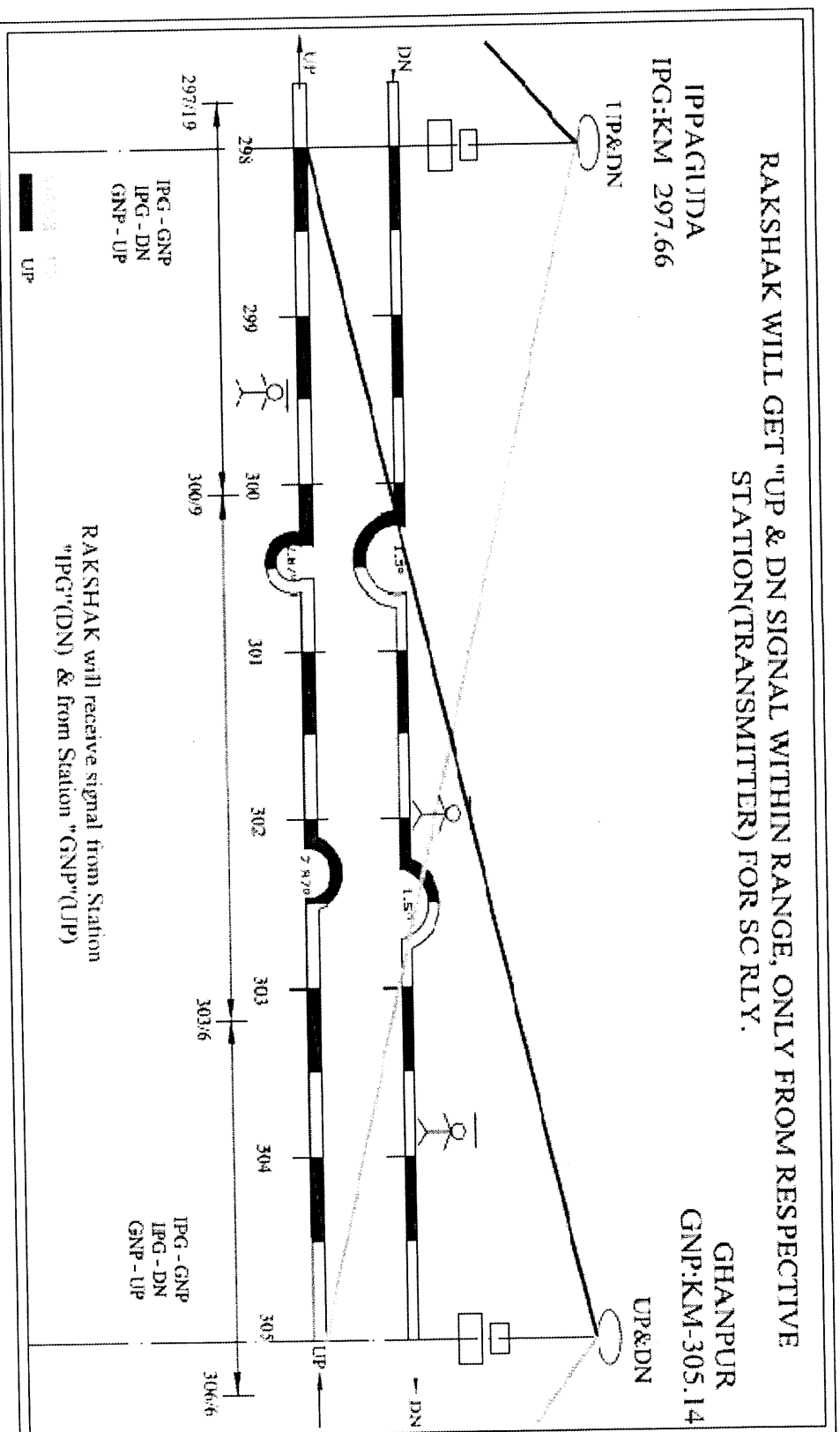
2.4 PERFORMANCE REPORT ON RAKSHAK:

The Rakshak was provided to the keyman and patrolman of each unit under SSE/P.Way/Central/Kazipet section (Km 300/0 to 324/0 both UP & DN) under ADEN/North /Kazipet subdivision. It has been found very helpful for getting the advance information regarding both UP&DN approaching trains by way of **LED indication** along with **audible Buzzer** and **vibration** where the keyman could safely stand on the cess during passage of trains

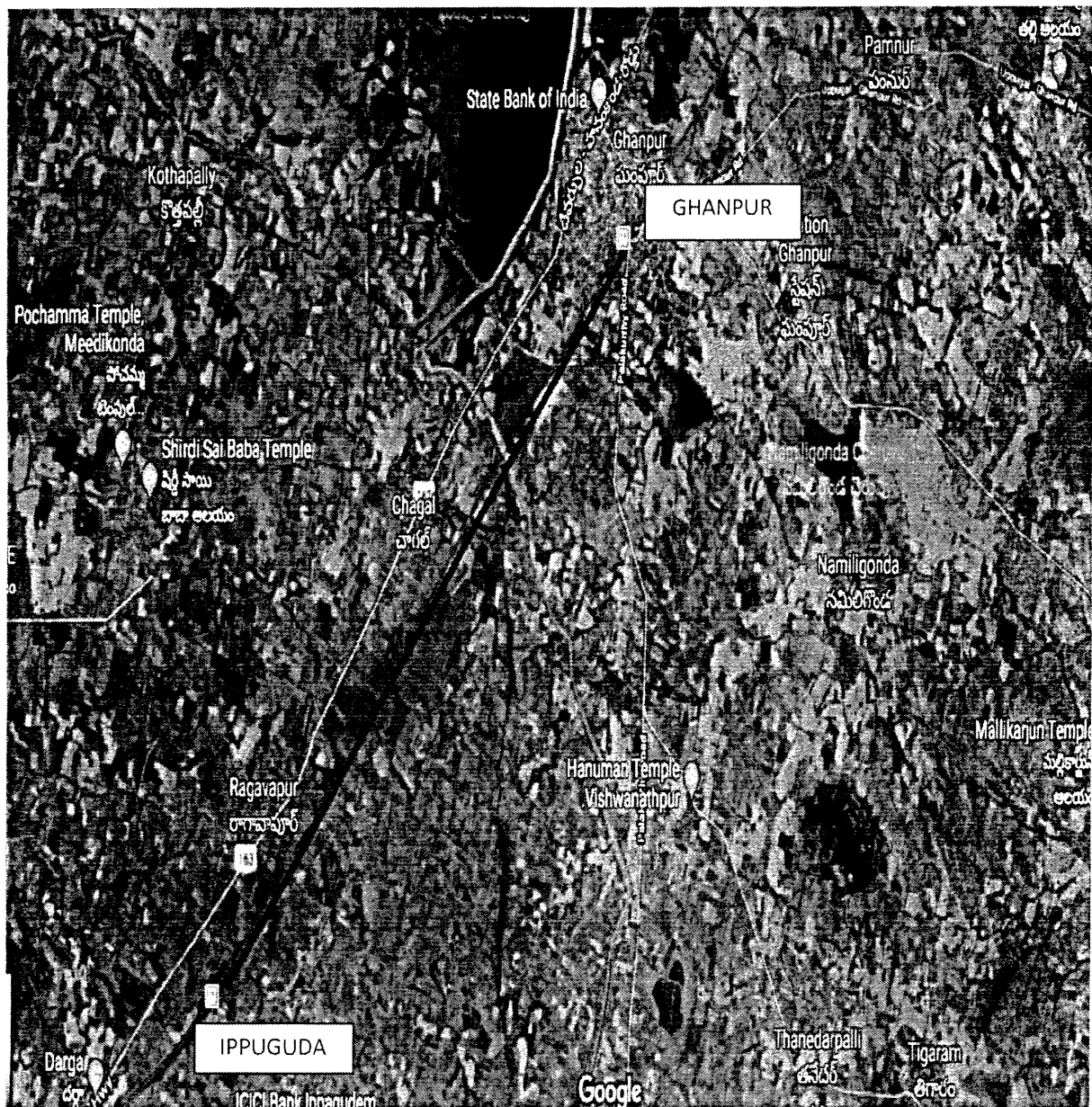
There was no incidence of missing buzzers regarding approach train. The Raskhaks have provided additional safety for the key men, patrolmen and gangs working on the track. *There was not a single incidence of run over cases after introduction of Rakshak, and interfering with the Relay working due to this connection in the relay room. The performances of all the Rakshaks have been found very satisfactory and the results were found encouraging.*

Based on satisfactory performance of Rakshak in SSE/P/C/KZJ section, the utilisation of Rakshak devices is extended to SSE/P.Way/Aler section in four block section i.e., Wangapalli – Aler , Aler – Pembarti , Pembarti – Jangaon & Jangaon – Ragunathpally stations (Km 252/0 – 300/0 both UP & DN) of Secunderabad – Kazipet sections also, for which Agency is fixed and procurement of WPC license is under process which is dealt by Sr.DSTE/Secunderabad.

3.0 Schematic Diagram of Signal Transmission and Reception In a typical block section



GOOGLE MAP



4.0 APPROXIMATE COST OF PROVISION RAKSHAK

A) SCHEDULE FOR PROVISION OF RAKSHAK DEVICE IN 4 BLOCK SECTION (KM 252/0 - 297/0 = 45KMs) UNDER SSE/P/ALER SECTION ON SC-KZJ SECTION

S No	Description	Unit	Rate	Qty	Amount (Rs)
1	Supplying, installation and commissioning of Digital Signal Modulator - Portable UP/DN Transmitter (including one year AMC)	each	354375	4	14,17,500
2	Supplying and commissioning Digital Signal Reciever RAKSHAK to receive signal Transmittd from Digital Signal Modulator (including one year AMC)	each	21853	64	13,98,592
3	WPC license for Transmitter & Reciever Per Year	each	23100	4	92,400
	a) Transmitter	each	14766	64	9,45,024
	b) Reciever	each	14766	64	9,45,024
	TOTAL				38,53,516

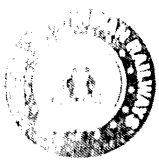
B) COST ANALYSIS FOR PROVISION & MAINTENANCE OF RAKSHAK DEVICE PER KM

S No	Description	Amount (Rs)
1	Cost for installation of RAKSHAK Transmitter & Receiver for 45 Kms in 4 block sections under SSE/P/Aler section on SC-KZJ section for both UP & DN lines	3853516
2	Total length : Both UP & DN lines put together i.e. 45KMs X 2	90 Kms
3	Cost of supplying, installation including AMC for 1 Km	3853516 / 90
4	Hence Per Km Cost of supplying, installation	42817

5 By adding contractor profit 10%, it will be

47099

Say 50000/Per Km/Year



No. 219-W/0/1/TP/12-13

Date : 11.12.2017

Executive Director/CE/G

Ministry of Railways
Railway Board
New Delhi.

**Sub: Improvement in the Cadre of Track Maintainer,
Mate & Keymen.**

**Ref : This office letter of even no. dated 9.10.2017 &
31.10.2017.**

Certain improvements in the cadre of Track maintainers were suggested to Board vide this office letters referred above. It is further suggested that as per restructuring of Track Maintainer, all Track Maintainers have been kept in 4 grades i.e. in GP 1800, 1900, 2400 and 2800 in the percentage of 60:22:12:6. The promotion from grade 3 to grade 2 is seniority cum suitability (non selection) and that from Grade 2 to Grade 1 is through trade test/viva-voce. While it takes care of promotions amongst Track Maintainer periodically, it does not clarify the process for posting of Keymen and Mates. Lack of clarity on the subject is leading to different practices been followed in different seniority units.

Accordingly it is proposed that:

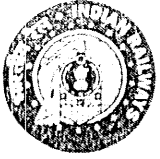
1. The process of selection of Keymen should be as earlier and AEN should hold the suitability test as per earlier norms. Keymen can be in any GP i.e. 1800, 1900, 2400 & 2800, however, they will be called for suitability as per seniority. AVC to Mate should be through Keymen.
2. Seniority on selection to Keymen is not affected.

3. Only Keymen would be eligible for Trade Test/Viva voce for GP-2800 as per seniority.
4. All Cadres of Track Maintainer I, II, III & IV should be maintained at Sub-divisional level by the ADEN. For Promotion in Gr.II & Gr.I suitability may be judged by the committee of Jr. Scale Officers at ADEN Office.

May consider the above proposal to dispel the lack of clarity on the subject.



(Naveen Chopra)
Principal Chief Engineer



प्रमुख मुख्य इंजीनियर
उत्तर रेलवे, बड़ौदा हाउस,
नई दिल्ली - 110001
PRINCIPAL CHIEF ENGINEER
Northern Railway,
Baroda House,
New Delhi-110001

No. 219-W/0/1/TP/12-13

Date : 11.12.2017

Executive Director/CE/G

Ministry of Railways
Railway Board
New Delhi.

**Sub: Improvements in the Cadre of Track Maintainer,
Mate & Keymen.**

**Ref : This office letter of even no. dated 9.10.2017 &
31.10.2017.**

Certain improvements in the cadre of Track maintainer were suggested to Board vide this office letters referred above. It is further suggested that as an alternative to the proposal of providing any special/additional allowances to Mates/Keymen and Gateman, we need to review their placement in the risk and hardship matrix as proposed in 7th PC report.

Currently all Track Maintainers are placed in R3H2 category matrix. The job of Mate and Keymen requires concentrated attention on the track under running traffic conditions and hence involves significantly higher risk as they work alone for significant periods, as compared to Track Maintainers who work in a group. Similarly in Special and "A" class gates the hardship involved is significantly higher as compared to other level crossing gates due to significantly large number of trains and road users and dealing with irate road users who have to wait when the gate is closed. .

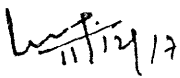
Accordingly it is proposed:

1. Keeping in view the higher risk associated with working alone on track while engaged in works requiring concentrated attention on track, under running traffic, Mate and Keymen need to be kept in higher risk category i.e. R2H2 as compared to normal track Maintainer i.e. R3H2.

Considering the fact that Gatemen (Special and A class) face higher hardship and have a higher nature of duty clubbed with much higher responsibility, they need to be kept in higher hardship category i.e. R3H1 as compared to other Gatemen i.e. R3H2.

3. P-way Artisan staff should be placed in R3H2 category of the risk hardship matrix.
4. Track Maintainers while working as Patrolmen will be eligible for Risk Hardship allowance as per R2H2.

Acceptance and implementation of the above proposal will take care of the reluctance of Track Maintainers to work as Mate, Keymen and Gatemen, as mentioned in our earlier proposal on the subject.


(Naveen Chopra)
Principal Chief Engineer

दक्षिण मध्य रेलवे
South Central Railway

महाप्रबंधक का कार्यालय
General Manager's Office
सिकंदरगढ़.
Secunderabad

No.G.157/Genl/2017

18.01.2018

**Shri T.K. Pandey
ED (Civil)
Transformation Cell
Railway Board**

Sub: Report of the Committee to review 'Uniform & Toolkits for Trackmen / Keymen / Patrolmen'.

With reference to above, Report of the Committee to review ' Uniform & Toolkits for Trackmen / Keymen / Patrolmen', signed by GM/NR (Member), GM/CR (Member) and GM/SCR (Convener) is enclosed herewith for further necessary action.

Encl: As above


(Prasun Chakraborty)
DGM/G

C/ -

PED/Transformation – for kind information

Report of the Committee to Review Uniform & Tool Kits for Trackmen/Keymen/Patrolmen

Executive Summary

Considering the hardships being faced by trackmaintainers and their important role in safe running of trains on IR, Railway Board constituted a committee to recommend measures to improve the working conditions of Track Maintainers. This report has been prepared to suggest measures to improve the working condition of trackmaintainers, who toil in extremely challenging conditions in the field. They are constantly on the alert during adverse climatic conditions - which include extreme winters, rains and extreme summers. In addition, they are required to carry a set of heavy tools for carrying out either planned or urgent maintenance and are also expected to protect the trains due to development of any unsafe conditions on the track.

The endeavor of the committee has been to suggest protective clothing to the trackmen over and above the uniform, for which they are paid a meager amount on annual basis. The conditions existing in certain geographical locations like Kashmir valley, where the temperature reaches sub zero level have also been considered. The committee has also noted that keymen and patrolmen have to walk on the ballasted tracks for long stretches, which is very uncomfortable and tiring. Also the work of the trackmen involves working with heavy objects like rails and sleepers, which can topple on their feet while working. The feet need to be adequately covered for this purpose. Thus their working conditions are similar to that existing on a shop floor or a construction project. Special shoes have been recommended to cater to this need.

On the question of decreasing the weight of the tools carried by trackmen, it is noted that Board has issued certain instructions in the recent past, which address this issue adequately. However certain improvements to tool kits and other equipment/aids have been suggested by the committee to aid the trackmen. These include a new bag for keymen/patrolmen, LED torches and staffs for patrolmen.

The committee has also suggested mode of procurement and periodicity for the protective gear, so that the material can be procured economically to the best quality, timely. This will ensure that the recommendations for the improvement of the working conditions of the trackmen do not remain on paper and are implemented satisfactorily.

A model tool cum rest room has also been recommended for adoption, so that trackmen can work with dignity and change their clothes and collect the tools for



working from this place. To improve their safety, "Rakshak" protection system, as tried on South Central Railway, has been recommended for adoption in a phased manner.

The unification of the cadre of keymen/trackmen/patrolmen/watchmen/mate has resulted in certain anomalies, which are compromising the safety at the ground level, as well as causing resentment in the cadre. Trackmen are reluctant to work as keymen, in absence of an elevated status or increase in pay for handling higher responsibilities. Similar is the issue with erstwhile category of mate. Committee has made certain recommendations, which will address this issue to a large extent.

A gist of the recommendations made by the committee is as under:

1.0 Uniform and Protective Gears:

The following job specific protective gears should be provided as per the prevailing climatic conditions with the approval of DRM.

S.No.	Description	Functional specification	Scale	Approx. Cost (inRs.)
1.	Rain Coat with cap/hood and separate waterproof trouser	Waterproof coat and trouser with full sleeves and cap/hood.	Once in a year	1200/-
2(a)	Winter Jacket	Jacket with inner lining with/without hood/cap, orange color superior quality.	Once in 2 years	2500/-
OR				
2(b)**	Clothing for Subzero climate i. Jacket ii. Trouser iii. Gloves iv. Snow boots v. Cap	As per military clothing from Ordinance factories/approved suppliers of Ordinance factories.	Once in 2 years	10,000/-
3.	Safety Shoes(with Steel Toes)	As per IS 15298 (Part 2): 2011 / ISO 20345:2004 Some of the reputed brands are Bata, Liberty, Action etc.	Once in six Months	1400/-
4.	Luminous vest	Retro-reflective orange colour, IS-15809 of 2008 specified by EN471 Standard	Once in Six months	500/-

5.	Safety Helmet with detachable miner's light	Miner's helmet to IS specifications IS 2925-1884 (modified in 2010) with detachable headlights having flexibility for rotation provided with straps.	Once in a year	1400/-
6	Tool Kit Bag	As developed by PUNE Division, CR or Ferozpur Division of NR Material –Matte Nylon-1680 Black, Red & Orange Color, with canvas for lining	Once a Year	1400/-
7*	Tricolor LED 3-cell Torch/ rechargeable torch	As being used by SCR / NR	Once a Year	1000/-

* Tricolor LED 3-cell Torch/ rechargeable torch to be provided to Mate, Keymen and all track maintainers deputed for night patrolling

** Winter jackets as per item 2a) will not be supplied in subzero climate region, as provisioning of the same is already included in item 2b). In addition, any specific requirement for any particular area/climatic condition may be assessed by the respective DRM.

2.0 Tools and Equipment:

- 2.1 It is recommended to provide light weight improvised tools and equipment such as spanner, hammer, crow bar, mortar pan etc. to track maintainers, as per extant Board's instructions.
- 2.2 The committee recommends providing tricolor LED 3-cell Torch/ rechargeable torch developed by NR/SCR in place of H. S. Lamps. Such LED torches are to be provided to Mate, Keymen & all Track maintainers deputed for Night patrolling. Regarding payment to the Track Maintainers deputed for night patrolling duties, for purchase of dry cells, it has already been decided by Board (ME & FC) vide Railway Board's letter no 2016/CE-I/GNS/4 pt. dated 07.12.2017 (Annexure- X) to pay @ Rs 150 per month to all track maintainers deputed for night patrolling. Same is to be adopted.
- 2.3 Improvised staff for patrolman, as being used in SCR should be provided in place of conventional staff.
- 2.4 Sturdy light weight backpack Tool kit bag with provision to keep various equipment. The bags developed by Pune Division of Central Railway or of Firozpur Division of Northern Railway are considered appropriate for use by

keymen/patrolmen. Such tool kit bag may be given to all Track maintainers including P-way-artisans and their helpers.

3.0 **Mode of Procurement**

As on date Stores department is procuring luminous vests. The system may continue for the vest. The other items mentioned in para 2.1 & 2.2 may be procured at Divisional Level through **Spot purchase committee** consisting of Sr.DEN/DEN incharge, Sr.DFM/DFM, Sr.DMM/DMM. Once the system is stabilized and the vendors are developed; these may be procured through stores department in the division.

4.0 **Other Measures to Improve the Working of Trackmaintainers**

4.1 **Rakshak**

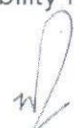
"Rakshak" protection system for patrolmen/trackmen has been adopted by SCR on Secunderabad- Kazipeth section in a stretch of 24 KMs and has been found to be useful in getting advance information regarding approaching trains by way of LED indication along with audible buzzer and vibration. This has thus added additional safety for the Track maintainers working on the Track. Such systems are recommended for further adoption on other Railways in a phased manner.

4.2 **Track Maintainers cadre related issues**

For improving the working conditions of Mate, Keymen, Trackmen and Artisans to make their job more respectful, disciplined and sought after certain changes in cadre management of Track Maintainers are required. It is also understood that a proposal for enhancing Risk and Hardship allowance for these categories is under approval in Railway Board.

In this regard, the Committee recommends as under:-

- i. The process of selection of Keymen should be as per the system prevailing earlier. ADEN should hold the suitability test as per old norms. Keymen is to be in minimum GP of 2400/-, however, they will be called for suitability as per seniority. GP of 2400/- needs to be given only to the Trackmen who are willing to become Keymen.
Promotion to Mate should be through Keymen only.
- ii. Only Keymen would be eligible for selection for GP-2800 (i.e. Mate) as per seniority.
- iii. All Cadres of Track Maintainer I, II, III & IV should be maintained at Sub-divisional level by the ADEN. For Promotion in Gr.II & Gr.I, suitability may be judged by the committee of Jr. Scale Officers at ADEN Office.



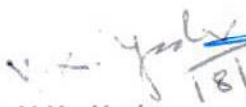
- iv. Keeping in view the higher risk associated with working alone on track while engaged in works requiring concentrated attention on track, under running traffic, Mate and Keymen need to be kept in higher risk category i.e. R2H2 as compared to normal track Maintainer i.e. R3H2. Accordingly, allowances varying from Rs.6000/- to Rs.10500/- needs to be paid instead of Rs.2700/- to Rs.3400/- at present according to the Grade.
- v. Considering the fact that Gatemen (Special and A class) face higher hardship and have a higher nature of duty clubbed with much higher responsibility, they need to be kept in higher hardship category i.e. R3H1 as compared to other Gatemen i.e. R3H2. Accordingly, allowances varying from Rs.4100/- to Rs.5300/- will be paid.
- vi. P.Way Artisan staff along with their Helpers should be placed in R3H2 category of the risk hardship matrix. Accordingly, allowances varying from Rs.2700/- to Rs.3400/- needs to be paid according to the Grade.

5.0 Gang Tool cum Rest Room

A tool cum rest room should be provided in the gang beat of each sectional gang preferably at the station or at level crossing. The room to have resting facility, private lockers for keeping their small belongings etc. The toolbox can also be accommodated in the same building. This type of accommodation can be provided near the Station building as far as possible or at the level crossing falling in the gang beat. In addition to regular supply of electricity alternate source of Solar lighting may also be provided in these rooms. For watering hand-pump/piped water supply may be provided. Prefabricated modern construction methods already in use on certain Railways (Gang rest room of KGP div of SER) may be used for early and quality construction. These should be constructed in a phased manner through funds from Track renewal works/RRSK. Priority may be decided locally by DRM.

Tushar Kant Pandey
Executive Director (Civil)/Transformation/Railway Board
Member Secretary


18/11/18
Vishwesh Chaubey
General Manager/NR
Member


18/11/18
V K Yadav
General Manager/ SCR
Convener


18.11.18
D K Sharma
General Manager/CR
Member

Report of the Committee to Review Uniform & Tool Kits for Trackmen/Keymen/Patrolmen

Railway Board vide letter No.2018/Transf.cell/03 dt.08.01.2018 (Annex-I) constituted a Committee to review Uniform and Tool Kits for Trackmen/Keymen consisting of the following members:

a) GM/SCR	Convener
b) GM/NR	Member
c) GM/CR	Member
d) ED(Civil)/Transformation	Member Secretary

Terms of Reference of the Committee are as under:

- a. Suggest Uniform to be used by Trackmen/keymen. Uniform may include shoes, overcoat / jacket etc. The diversity of seasons may also be taken into account.
- b. Suggest tool kits and other equipment / aids (Tricolor LED lamps, chargeable torches) of light weight and ergonomical design to improve their productivity.
- c. Suggest mode of procurement and periodicity.
- d. Suggest measures to develop suppliers / vendors for ensuring sustained quality of Uniform and customized tool kits.
- e. Suggest any other measures that may be necessary to improve the working of Trackmen/keymen.
- f. May look into the extant guidelines and best practices prevailing on Zonal Railways

A subcommittee consisting of PCE/SCR, CE/TM/SCR, CE/TMC/NR & CE/TM/CR was constituted to deliberate the issues and bring out good practices at various places, existing instructions, field conditions, interacting with field officers & staff and collecting samples of different items. A draft report prepared by this subcommittee has also been taken into consideration.

1.0 Preamble

The keymen & patrolmen play an important role in safe running of trains as they detect any unsafe conditions in the Track and pre-warn and protect the train. They are required to carry out their duties in extreme weather conditions. During low temperatures in winter nights they are responsible for detecting any crack/fractures in

the track, which may be unsafe for running of trains. This activity is carried out in poor visibility conditions at odd hours, walking alone on ballast.

During high temperatures in summers, they are required to look for any sun-kinks, which may lead to buckling of track, thus creating unsafe conditions. During heavy rains in monsoons they look out for any conditions, which may obstruct train, movement, such as boulder falls, breach in the track etc.

Thus keymen and patrolmen are required to perform their duties in extremes of weather. In order to ensure that they carry out their duty with efficiency and sincerity, it is necessary to provide them with the protective and safety gears. This is required for their health and personal safety as well. This will further enhance their efficiency, thereby enabling better safety for train operations.

While carrying out the patrolling, patrolmen are required to carry set of tools and equipment to perform the assigned work. They carry these heavy tools for which proper bag has not been provided to them. Also, there is a need to reduce the weight they carry by redesigning the tools with lighter and sturdy material. Various railways have made the efforts in this direction but there is a need to adopt the best practices uniformly on Indian Railways.

The Committee has considered the innovations done and best practices being followed by various Railways in respect of safety gears, tools, protective equipment being used by them as per the environment and local conditions. The Committee also has taken into consideration the various policy guidelines issued by Railway Board from time to time in this respect and the same have been enclosed as annexures.

The unification of the cadre of keymen/trackmen/patrolmen/watchmen/mate has resulted in certain anomalies, which are compromising the safety at the ground level, as well as causing resentment in the cadre. Trackmen are reluctant to work as keymen, in absence of an elevated status or increase in pay for handling higher responsibilities. Similar is the issue with erstwhile category of mate. Committee has gone into the issue to address it.

2.0 Deliberations of the Committee:

The deliberations of the Committee on the Terms of reference are discussed below:

2.1 Special Protective Clothing for Trackmen/Keymen

2.1.1 The Trackmen/Keymen/Patrolmen have been getting the uniform as per the yardstick stipulated in the Railway Board Circular/guidelines issued and amended from time to time. The relevant Railway Board Circular No.E(W)95 UNI-19 dt.



27.12.2005 (Uniform circular No.3 of 2005) broadly deals the issue of uniform and other accessories to Trackmen, Keymen, Mate & Patrolmen (Annex-II). Several modifications and amendments have also been issued subsequently.

- 2.1.2 Various items mentioned in the Uniform Circular were being procured by the Stores Dept. and supplied to the concerned department till now. However, the system had inherent shortcomings. There were delays in procurement and distribution of uniform. This not only resulted in complaints from the staff and recognized unions, but was also defeating the very purpose of providing the uniform.
- 2.1.3 However, as per Railway Board letter No-RBE No.141/2017 dated 03.10.2017 (Annex-III) this practice of supplying uniform items has been stopped consequent to the decision taken by Government on the Recommendations of 7th Central Pay Commission, Uniform related allowances viz., Kit maintenance allowance, Shoe allowance, Uniform allowance, Washing allowance etc. have been subsumed into a single Dress allowance and the same is now to be paid at the rate of Rs. 5000/- per annum to them. Railway Board's letter in this regard is enclosed as Annexure III.
- 2.1.4 Committee feels that for Trackmen/keymen/Patrolmen the provision of Rs.5000/- as Dress Allowance should be continued and this will cover Shirts (both summer & winter), trousers, woolen jersey, headgear other than helmet, mittens, socks and water bottles. This also includes washing & maintenance allowance for the Uniform. For Track women, dress allowances will cover Kurta (both summer & winter), Salwar, woolen jersey, headgear other than helmet, mittens, socks and water bottles. The colour scheme of dress for Track women will be the same as for Trackmen.
- 2.1.5 Keymen & patrolmen have to walk on the ballast in the track in extreme climatic conditions ranging from very high temperature during summer while carrying out hot weather patrolling and also in very low temperatures in the night for cold weather patrolling. It is necessary to provide special gears to them to protect them from extreme weather conditions. Special shoes are required since they have to walk on the ballast and also protect their feet while handling rails, sleepers etc. All these conditions are job specific and therefore cannot be covered by the normal uniform. It is also noted that Patrolmen are not a separate category and all the track maintainers are liable to be deployed for patrolling. This requirement to provide clothing to them is covered in clause 1007 of IRPWM (Annex-IV). Safety shoes (with steel toe) are considered appropriate for this use (Annex-IVa).



2.1.6 The Committee also noted that there are certain regions like Kashmir Valley where there is extreme winter and the temperature reaches sub zero level. A need therefore arises that the staff posted in J&K and other parts of the country where temperature reaches sub zero level, are provided with additional protective clothing such as Coat ECC, Trouser ECC and Lined Leather Gloves for which specifications for Indian Army/BSF and other Paramilitary Forces posted in such areas (Annex-V) exist. Ordinance Factory Board manufactures these items and brief specifications of these items are enclosed. There is also necessity of Snow Boots in sub zero/extreme winter area (Annexure XIII).

2.1.7 The Committee is recommending, certain job specific protective gears, which are of critical & safety nature and need to be provided as per the prevailing climatic conditions to all Track maintainers including P-way-artisans and their helpers. These items may be provided on division basis, modification if any due to local climatic conditions, may be considered with the approval of DRM. These are listed below:

S.No.	Description	Functional specification	Scale	Approx. Cost (inRs.)
1.	Rain Coat with cap/hood and separate waterproof trouser	Waterproof coat and trouser with full sleeves and cap/hood.	Once in a year	1200/-
2(a)	Winter Jacket	Jacket with inner lining with/without hood/cap, orange color superior quality.	Once in 2 years	2500/-
OR				
2(b)	Clothing for Subzero climate i. Jacket ii. Trouser iii. Gloves iv. Snow boots v. Cap	As per military clothing from Ordinance factories/approved suppliers of Ordinance factories.	Once in 2 years	10,000/-
3.	Safety Shoes(with Steel Toes)	As per IS 15298 (Part 2): 2011 / ISO 20345:2004 Some of the reputed	Once in six months	1400/-

		brands are Bata, Liberty, Action etc.		
4.	Luminous vest	Retro-reflective orange colour, perforated IS-15809 of 2008 specified by EN471 Standard	Once in Six months	500/-
5.	Safety Helmet with detachable miner's light	Miner's helmet to IS specifications IS 2925-1884 (modified in 2010) with detachable headlights having flexibility for rotation provided with straps.	Once in a year	1400/-

Winter jackets as per item 2a) will not be supplied in subzero climate region, as provisioning of the same is already included in item 2b). The safety gears suggested above will suit under most of the climatic conditions. However specific requirement, if any, for any particular area/climatic condition may be assessed by the respective DRM and may be provided accordingly.

2.2 Tool kits and other equipment/aids

2.2.1 Railway Board vide letter No.2014/CE-II/Gen/PNM dt. 02.05.2016(Annex-VI) revised the list of equipments to keymen and also advised to use light weight, sturdier alloy make tools. Modified fish bolt spanner, crowbar and mortar pan have already been issued from Railway Board in June '2016(Annex-VII) which are found suitable. These steps have been taken in view of announcement made in Budget speech 2016 by Hon'ble MR, wherein he had announced that "*We will also reduce the weight of the tools carried by them (Trackmen/Keymen) while patrolling on foot through value engineering*". **The committee finds these improvised tools and equipment suitable for adoption.**

2.2.2 Design of tool kit bag was also circulated from Railway Board. There are certain improvements carried out in the design and the bags developed by Firozpur Division of Northern Railway, Ratlam Division of Western Railway, Secunderabad division of South Central Railway and Pune Division of Central Railway were examined. The bags have been further improved to dedicate space for various tools on the backside as well as front side. **The bags developed by Pune Division of Central Railway and Firozpur Division of Northern Railway are considered appropriate for use by keymen/patrolmen due to its compact and sturdy design.** The fabric of bag developed by Pune division of CR seems better and using the same bag of Ferozpur/NR may be improved and adopted. This bag is also in

line with the backpacks being used by youths and provides the convenience of keeping their hands free. Its drawing, specifications & photograph are enclosed (Annex-VIIa). **The approximate cost of the bag is Rs 1400/- . Such tool kit bag is proposed to be given to all Track maintainers including P-way-artisans and their helpers as the duties are interchangeable.**

2.2.3 LED Torch

It is proposed to replace the existing Hand Signal lamps with three cell LED torch lights. These torches are provided with bright LED white light for general inspection purpose and red and green LED lights for stopping/passing the trains in case of emergency.

- a. The aspects shown by the LED torches are visible for long distances very clearly and they are light in weight. The approx. Cost of the torch is Rs 1000. Similar torch lights are being used in South Central Railway for the last 5 years. The brief specifications are as under:
 - i. Three cell electrical torch 4.5Volt, 3 watt.
 - ii. Unbreakable glass front.
 - iii. Operation with dry cells.
 - iv. Weight of Tri-color torch light – 435 gms. Approx.(including batteries)
 - v. Option for both Rechargeable and Dry Cell is there. Division may decide the appropriate option depending upon local conditions.

Alternatively, Tri-colour rechargeable torches developed by Northern Railway, which have better illumination may be used. Their specifications are enclosed (Annex-VIII). The decision to adopt any particular type may be taken at the divisional level with approval of DRM.

Such LED torches are to be provided to Mate, Keymen & all Track maintainers deputed for Night patrolling.

Regarding payment to the Track Maintainers deputed for night patrolling duties, for purchase of dry cells, it has already been decided by Board(ME & FC) vide Railway Board's letter no 2016/CE-I/GNS/4 pt. dated 07.12.2017 (Annexure- X) to pay @ Rs 150 per month to all track maintainers deputed for night patrolling. Same is to be adopted.

- 2.2.4 Staff for patrolman: The patrolman also carries a staff to display his beat number and displays the flag/lamp in case of emergency. **The design of the staff has**



also been improvised by using hollow pipe with duly modified base for fixing on the track in emergency. The photograph is enclosed (Annex-IX).

Committee strongly feels that the light weight, sturdy tool and properly designed tool bag is very much required for proper working.

2.3 Mode of procurement and periodicity:

Committee deliberated the procurement process at length. As on date Stores department is procuring luminous vests. The system may continue for the illuminous vest. The other items mentioned in para 2.1 & 2.2 above may be procured at Divisional Level through **Spot purchase committee** consisting of Sr.DEN/DEN incharge, Sr.DFM/DFM, Sr.DMM/DMM. In present day market scenario, better products are available at competitive pricing. The items such as Jacket, Raincoat, Shoes, Bag, equipment such as torches etc. are not only used in Railways but in general also. So to get a better product at competitive rate, spot purchase method is more appropriate. Procurement can be done on the basis of broad specification as per the approximate cost prescribed.

Once the system is stabilized and some experience is gained, Zonal Railways /Divisions should shortlist the vendors/suppliers and approve for each item of uniform and tool kit. Sr.DMM of the division may then finalize rate contract with these vendors, validity of which may be kept as 2-3 years. Thereafter the consignee should finalize the demand and get the material directly from vendors through Sr.DMM.

The item should be procured keeping in view, the local conditions & requirement, which are to be specified at Divisional level.

2.4 Developing suppliers/vendors for ensuring sustained quality of Uniform and customized tool kits.

Zonal Railways /Divisions should shortlist the vendors/suppliers and approve for each item of uniform and tool kit. PCMM and /or Sr.DMM of the division may finalize rate contract with these vendors; the validity of which may be kept as 2-3 years. The consignee should finalize the demand and get the material directly from vendors through Sr.DMM.

As the material required is proposed to be procured at Divisional level and will be in bulk quantity, in order to have latest products at competitive rates, leading vendors/brands may be contacted to compete.



2.5 Any other measures necessary to improve the working of Trackmen/keymen

2.5.1 Model Tool cum Rest Room:

At present the gang assembles at the tool box provided in the open to collect the tools and thereafter moves to the place of work. This has to be done throughout the summer, winter and rainy season. During adverse climate, the gang is forced to take rest under the trees or nearby available level crossings. The Committee deliberated this issue in detail. **It is considered that to improve the working of track maintainer, they should be provided with proper room which should have resting facility, private lockers for keeping their small belongings etc. The toolbox can also be accommodated in the same building.** This type of accommodation can be provided near the Station building as far as possible or at the level crossing falling in the gang beat so as not to attract the provision of travelling allowance while working in their beat. In addition to regular supply of electricity alternate source of Solar lighting may also be provided in these rooms. For watering hand-pump/piped water supply may be provided. Prefabricated modern construction methods already in use on certain Railways (Gang rest room of KGP div of SER) may be used for early and quality construction. These should be constructed in a phased manner through funds from Track renewal works/RRSK. Priority may be decided locally by DRM. A sample drawing for the suggested tool cum rest room is enclosed (Annex-XI).

2.5.2 Rakshak

"Rakshak" protection system for patrolmen/trackmen has been adopted by SCR on Secunderabad-Kazipeth section in a stretch of 24 KMs and has been found to be useful in getting advance information regarding approaching trains by way of LED indication along with audible buzzer and vibration. This has thus added additional safety for the Track maintainers working on the Track. Detailed Report from CTE/ SCR at Annexure-XIV.

Such systems are recommended for further adoption on other Railways in a phased manner

2.5.3 It is noted that Northern Railway has submitted proposals to Railway Board for improving the working conditions of Mate, Keymen, Trackmen and Artisans to make their job more respectful and sought after. It is also understood that a proposal for enhancing Risk and Hardship allowance for these categories is under approval in Railway Board. (NR Correspondence at Annexure-XV)

In this regard, the Committee recommends as under:-



- i. The process of selection of Keymen should be as per the system prevailing earlier. ADEN should hold the suitability test as per old norms. Keymen is to be in minimum GP of 2400/-, however, they will be called for suitability as per seniority. GP of 2400/- needs to be given only to the Trackmen who are willing to become Keymen.
Promotion to Mate should be through Keymen only.
- ii. Only Keymen would be eligible for selection for GP-2800 (i.e. Mate) as per seniority.
- iii. All Cadres of Track Maintainer I, II, III & IV should be maintained at Sub-divisional level by the ADEN. For Promotion in Gr.II & Gr.I, suitability may be judged by the committee of Jr. Scale Officers at ADEN Office.
- iv. Keeping in view the higher risk associated with working alone on track while engaged in works requiring concentrated attention on track, under running traffic, Mate and Keymen need to be kept in higher risk category i.e. R2H2 as compared to normal track Maintainer i.e. R3H2. Accordingly, allowances varying from Rs.6000/- to Rs.10500/- needs to be paid instead of Rs.2700/- to Rs.3400/- at present according to the Grade.
- v. Considering the fact that Gatemen (Special and A class) face higher hardship and have a higher nature of duty clubbed with much higher responsibility, they need to be kept in higher hardship category i.e. R3H1 as compared to other Gatemen i.e. R3H2. Accordingly, allowances varying from Rs.4100/- to Rs.5300/- will be paid.
- vi. P.Way Artisan staff along with their Helpers should be placed in R3H2 category of the risk hardship matrix. Accordingly, allowances varying from Rs.2700/- to Rs.3400/- needs to be paid according to the Grade.



3.0 Recommendations:

- 3.1 The following job specific protective gears may be provided to all Track maintainers including P-way-artisans and their helpers. These items may be provided on division basis, modification if any due to local climatic conditions, may be considered with the approval of DRM.

S.No.	Description	Functional specification	Scale	Approx. Cost (inRs.)
1.	Rain Coat with cap/hood and separate waterproof trouser	Waterproof coat and trouser with full sleeves and cap/hood.	Once in a year	1200/-
2(a)	Winter Jacket	Jacket with inner lining with/without hood/cap, orange color superior quality.	Once in 2 years	2500/-
OR				
2(b)**	Clothing for Subzero climate i. Jacket ii. Trouser iii. Gloves iv. Snow boots v. Cap	As per military clothing from Ordinance factories/approved suppliers of Ordinance factories.	Once in 2 years	10,000/-
3.	Safety Shoes(with Steel Toes)	As per IS 15298 (Part 2): 2011 / ISO 20345:2004 Some of the reputed brands are Bata, Liberty, Action etc.	Once in six Months	1400/-
4.	Luminous vest	Retro-reflective orange colour, IS-15809 of 2008 specified by EN471 Standard	Once in Six months	500/-
5.	Safety Helmet with detachable miner's light	Miner's helmet to IS specifications IS 2925-1884 (modified in 2010) with detachable headlights having flexibility for rotation provided with straps.	Once in a year	1400/-
6	Tool Kit Bag	As developed by PUNE	Once a	1400/-

		Division, CR or Ferozpur Division of NR Material –Matte Nylon-1680 Black, Red & Orange Color, with canvas for lining	Year	
7*	Tricolor LED 3- cell Torch/ rechargeable torch	As being used by SCR / NR	Once a Year	1000/-

* Tricolor LED 3-cell Torch/ rechargeable torch to be provided to Mate, Keymen and all track maintainers deputed for night patrolling

**Winter jackets as per item 2a) will not be supplied in subzero climate region, as provisioning of the same is already included in item 2b).In addition, any specific requirement for any particular area/climatic condition may be assessed by the respective DRM.

3.2 It is recommended to provide light weight improvised tools and equipment such as spanner, hammer, crow bar, mortar pan etc. to track maintainers, as per extant Board's instructions.

3.2.1 The committee recommends providing tricolor LED 3-cell Torch/ rechargeable torch developed by NR/SCR in place of H. S. Lamps. Such LED torches are to be provided to Mate, Keymen & all Track maintainers deputed for Night patrolling.

Regarding payment to the Track Maintainers deputed for night patrolling duties, for purchase of dry cells, it has already been decided by Board (ME & FC) vide Railway Board's letter no 2016/CE-I/GNS/4 pt. dated 07.12.2017 (Annexure- X) to pay @ Rs 150 per month to all track maintainers deputed for night patrolling. Same is to be adopted.

3.2.2 Improvised staff for patrolman, as being used in SCR should be provided in place of conventional staff.

3.2.3 Sturdy light weight backpack Tool kit bag with provision to keep various equipment. The bags developed by Pune Division of Central Railway or of Firozpur Division of Northern Railway are considered appropriate for use by keymen/patrolmen. Such tool kit bag may be given to all Track maintainers including P-way-artisans and their helpers.

3.3 As on date Stores department is procuring luminous vests. The system may continue for the vest. The other items mentioned in para 3.1 above, may be procured at Divisional Level through **Spot purchase committee** consisting of



Sr.DEN/DEN incharge, Sr.DFM/DFM, Sr.DMM/DMM. Once the system is stabilized and the vendors are developed; these may be procured through stores department in the division.

- 3.4 A tool cum rest room should be provided in the gang beat of each sectional gang preferably at the station or at level crossing. The room to have resting facility, private lockers for keeping their small belongings etc. The toolbox can also be accommodated in the same building. This type of accommodation can be provided near the Station building as far as possible or at the level crossing falling in the gang beat. In addition to regular supply of electricity alternate source of Solar lighting may also be provided in these rooms. For watering hand-pump/piped water supply may be provided. Prefabricated modern construction methods already in use on certain Railways (KGP div of SER) may be used for early and quality construction. These should be constructed in a phased manner through funds from Track renewal works/RRSK. Priority may be decided locally by DRM.

3.5 **Rakshak**

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Such systems are recommended for further adoption on other Railways in a phased manner

- 3.6 It is noted that Northern Railway has submitted proposals to Railway Board for improving the working conditions of Mate, Keymen, Trackmen and Artisans to make their job more respectful and sought after. It is also understood that a proposal for enhancing Risk and Hardship allowance for these categories is under approval in Railway Board.

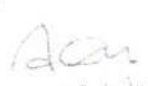
In this regard, the Committee recommends as under:-

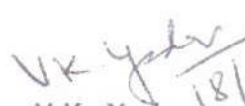
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- iii. All Cadres of Track Maintainer I, II, III & IV should be maintained at Sub-divisional level by the ADEN. For Promotion in Gr.II & Gr.I, suitability may be judged by the committee of Jr. Scale Officers at ADEN Office.
- iv. Keeping in view the higher risk associated with working alone on track while engaged in works requiring concentrated attention on track, under running traffic, Mate and Keymen need to be kept in higher risk category i.e. R2H2 as compared to normal track Maintainer i.e. R3H2. Accordingly, allowances varying from Rs.6000/- to Rs.10500/- needs to be paid instead of Rs.2700/- to Rs.3400/- at present according to the Grade.
- v. Considering the fact that Gatemen (Special and A class) face higher hardship and have a higher nature of duty clubbed with much higher responsibility, they need to be kept in higher hardship category i.e. R3H1 as compared to other Gatemen i.e. R3H2. Accordingly, allowances varying from Rs.4100/- to Rs.5300/- will be paid.
- vi. P.Way Artisan staff along with their Helpers should be placed in R3H2 category of the risk hardship matrix. Accordingly, allowances varying from Rs.2700/- to Rs.3400/- needs to be paid according to the Grade.


 Tushar Kant Pandey
 Executive Director (Civil)/Transformation/Railway Board
 Member Secretary


 12/1/18
 Vishwesh Chaubey
 General Manager/NR
 Member


 18/1/18
 V K Yadav
 General Manager/ SCR
 Convener


 18.1.18
 D K Sharma
 General Manager/CR
 Member