PROJECT ON

EFFICACY OF TRAINING OF

GROUP 'C' & 'D' STAFF

ON

INDIAN RAILWAYS

WITH SPECIAL EMPHASIS ON NWR

Session No.:9206

(SAG Refresher)

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Efficacy of training of Group C and D employees on Indian Railways with special emphasis on NWR

1.0 Objectives of Training

- Training of staff is very essential for any organisation to enable it to systematically create,share and apply knowledge to better achieve its objectives.
- We may have best of the ideas, strategy or technology, but if the people are not trained to take up the responsibility, the organisation will fail to achieve its objectives.
- This is also required to reduce the costs, to improve the quality of performance and efficiency of the staff

2.0 Codal/Manual provisions for training of Group C and D staff

- Chapter XV of IRPWM lays down the requirement of training of P.Way staff.
- Chapter XIII of Bridge manual requirement of training of Bridge staff.
- However it is seen that there is no provision for training of works staff in the Works manual.
- In addition the manual on management of training also lays down the schedules for initial and refresher training programmes for PWay, works and Bridge staff

3.0 Types of training

Broadly, Training has been categorized under the following four types:

- Initial training (For the purpose of orientation of new entrants in the organisation)
- Refresher training (For the purpose of refreshing)
- Promotional training (For the purpose of preparing staff for higher responsibilities)
- Special training (For the purpose of providing specialized knowledge)

3.1 Provisions of Appendix-II of training manual

Initial Training –

- JE/SE (Works) – 1 year. This constitutes 2 courses of total 3 months duration each for App.JE/II at ZRTI and balance period for field training. The duration of these courses for App.SE is 3 months and 2 months respectively.
- JE/SE (P.Way) – 1 Year
- JE/SE (Bridge) – 2 year (1 year as per Bridge manual)
- JE/SE (Drg.) – 1 year

Refresher Courses

- JE/SE (Bridge)- 18 working days, once in 5 years
- JE/SE/SSE/P.Way - 12 working days, once in 5 years
- Gate Keeper, Trolleymen- 12 working days, once in 5 years
- PWMs, Mate, Keyman, Gangman - 12 working days, once in 5 years.

3.2 Provisions of IRPWM

Initial course

- Trackman/Gateman – 2 Weeks at DET
- PWS – 6 months at ZRTI
- App.PWI – 1 year at ZRTI. This constitutes 2 courses of total 7 months duration months duration at ZRTI and balance period for field training. The first visit course of 4.5 months duration and second visit course is 2.5 months duration for App.JE/II. The duration of these courses for App.SE is 4 months and 2 months respectively.

Promotional Course

- From Trackman/Gateman/Keyman to Mate – 2 weeks at DET
- From Keyman/Mate to PWS – 4 weeks at ZRTI
- From PWS to JE/II – 6 weeks at ZRTI

Refresher Course

- As per correction slip No.113 dated 03.06.2008 to Para 1504, Keyman, Mate, PWS and JE/SE/SSE (P.Way) should be sent for refresher course once in 5 years.

- There is no mention of Trackman in the above provisions. However Board has separately issued instructions for inclusion of Trackman in safety category and for giving them basic training, promotional training and refresher courses.

3.3 Provisions of Bridge Manual

Initial course

- Bridge khalasi – 1 month duration at ZRTI
- HS grade-II/Artisan – 2 months at ZRTI
- App.bridge Inspector – 1 year at ZRTI. This constitutes one course of 3 months duration at ZRTI and balance period for field training.

Promotional Course

- From unskilled khalasi to skilled/semi skilled – 15 days at ZRTI
- From semi skilled/skilled khalasi to Bridge Mistry – 6 weeks at ZRTI
- From Bridge Mistry to BRI – 6 weeks at ZRTI

Refresher Course

- Bridge Mistry and Bridge Inspector should be sent for refresher courses once in 5 years. The duration of the course shall be 3 weeks.

4.0 Present set up for Training

- The training of Group D staff is arranged in Divisional Engineering Training Schools attached to each division

- The training of Group C staff is centralized in ZRTI's attached with Zonal Railways

- The training of bridge cadre staff is also provided at Central Bridge Training Institute, Manmad

5.0 Training of Artisan Staff

- No guidelines for training of artisan staff of P.Way and Works cadre are have been laid down at present.

- However provision for training of Artisan staff of Bridge cadre is covered in the chapter XIII of Bridge manual which is to be imparted in ZRTI's.
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6.0 Training institutes visited for the project

- Divisional Engineering Training School at Lalgarh of Bikaner division.

- Divisional Engineering Training School at Ajmer of Ajmer division.

- ZRTI at Udaipur of NWR

7.0 Status of Training at DET/Lalgarh

- The institute is headed by SSE/Pway, who is the only instructor of the DET. The institute has the capacity to conduct 24 courses with 30 seats in each course i.e. 720 trainees per year.

- Though separate modules for different courses is prescribed, but only one common module is being taught to Trackman, Keyman, mate, gateman and trolleyman.

7.1 Training Aids

- 1 OHP, but not in working condition.
- 3 Films on available with the traffic deptt on LWR, U/Manned Level Crossing gates and Accident restoration are shown to the trainees by utilizing their TV and VCP.
- A model room and a small demonstration yard exist having PSC track with SEJ and glued joint. The space is inadequate for the demonstration yard and model room. The model room is having one set of all engineering indicator & speed boards, road sign boards for LC, various P.Way tools and fittings, various measuring equipments, protection diagram for work site and LC and SEJ diagram.
- 2 books of course material prepared by in-charge instructor in Hindi for training of trackman/key man/mate and gateman

7.2 Facilities available at the Institute

- One class room with seating capacity of 25 trainees is only available.
- Hostel accommodation – 60 beds for combined Engg, traffic and C&W trainees exists, which is not adequate.
- Messing is self managed by trainees. There is no post of cook in the institute.

7.3 Training Statistics of last 3 years of DET/Lalgarh

Year	Mate	Keyman	Gateman	Track man	Trolley man	Total	% utilization
2008-09	50	51	148	804	36	1089	**121.7**
2007-08	48	65	157	341	13	624	**74.06**
2006-07	24	31	78	98	17	248	**41.76**

Cadre on Bikaner Division

SN	Category	On Roll	Yearly arising of refresher course
1	Mate	238	48
2	Keyman	240	48
3	Gateman	451	90
4	Trackman	1920	384
5	Trolleyman	242	49
	Total	3091	619

The yearly requirement of refresher course for the above categories is 619 trainees. The requirement of initial, promotional and special courses will be also be there as per actual requirement. This does include the requirement training for works cadre.

7.4 Observations on the Capacity and facilities for training.

- Capacity is inadequate for refresher and other courses.
- No training for works cadre is being provided in the DET, Lalgarh.
- There is no infrastructure for training of works staff at the DET.
- No training in fire protection and First Aid is being arranged

8.0 Status of Training at DET/Ajmer

- The institute is headed by SSE/Pway. One more SE/PWay and one SE(Works) is posted but they are not imparting ant training at DET and being utilized in the division in some other capacity. The institutes has the capacity to conduct 24 corses with a capacity of 35 seats in each course i.e. 840 trainees per year.
- Separate modules for initial, promotional, refresher and special courses are being conducted as per requirement.

8.1 Training Aids

- 11 technical films of IRICEN are available but no TV or CD player is available. They are shown by hiring the TV and CD player. Only 2 films are in Hindi i.e. Gang tools and maintenance of PSC sleepers and others are in English.
- A model room and a small demonstration yard exist having PSC track with SEJ, turnout on ST sleeper and a level crossing. The space is inadequate for the demonstration yard and model room. The model room is having one set of all engineering indicator boards, road sign boards for LC, various P.Way tools and fittings, protection diagram for work site and LC and SEJ diagram.
- 1 book of course material prepared by in-charge instructor in Hindi
- M.M.Aggarwal book on P.way
- 2 books on gateman training in Hindi
- Book on Laying and maintenance of PSC track in Hindi
- Course material for training of artisans issued by CAMTECH, Gwalior

8.2 Facilities available at the Institute

- One class room with seating capacity of 35 trainees is only available.
- Hostel accommodation – 30 beds in 2 old dormitories is available. The mattresses and beds are old and needs replacement
- Messing is self managed by trainees. Required infrastructure is available but no cook is available.

8.3 Training Statistics of last 3 years of DET/Ajmer

Year	Initial	Promotional	Refresher	Special	Total	**% utilization**
2008-09	350	07	172	132	542	**64.52**
2007-08	31	44	239	395	709	**84.40**
2006-07	49	76	286	281	692	**82.38**

Cadre on Ajmer Division

SN	Category	Sanctioned strength	On Roll
1	Mate	152	107
2	Keyman	187	160
3	Gateman	337	283
4	Trackman	1847	1642
	Total	2523	2192

The yearly requirement of refresher course for the above categories will be approx. 440 trainees. The requirement of initial, promotional and special courses will be also be there as per actual requirement. This does include the requirement training for works cadre.

8.4 Observations on the Capacity and facilities for training.

- Capacity is inadequate for refresher courses and other courses.
- Though refresher courses for artisan staff is planned but the attendance is very poor. Only 3 artisans are trained in 2008-09.
- Though 1 SE(Works) is posted but no training for works cadre is being provided.
- There is no infrastructure for training of works staff at the DET.
- No training in fire protection and First Aid is being arranged

9.0 Status of Training at ZRTI, Udaipur

- The institute is headed by SG officer of Traffic Deptt. The faculty of Engg deptt includes 2 AENs and 7 instructors. The institute has planned to conduct total of 40 courses with a capacity of 30 seats in the each course. 3 seats have been allotted for each division for each course. The institute is catering to the needs of 6 divisions of Western railway and 4 divisions of NW Railway. As per the annual programme of 2009-10, the total training capacity of the institute comes to 1200 trainees per year.

- Separate modules for initial, promotional, refresher and special courses are being conducted as per requirement for Group C staff of P.Way, Works and Bridge cadre. No course for drawing cadre is being conducted.

9.1 Training Aids

- Every class room has OHP
- LCD with computer in 4 class rooms and PWay model room.
- Computer in Works model room
- P.Way and Works model rooms.
- A small demonstration yard.

9.2 Facilities available at the Institute

- 5 class rooms with seating capacity of 30 trainees are available.
- Good Hostel accommodation is available.
- Good Messing arrangement is available.
- Morning yoga for all trainees is prescribed.
- Adequate recreational facilities and games for trainees

9.3 Training Statistics of last 3 years of ZRTI, Udaipur

Year	Initial	Promotional	Refresher	Special	Total	**% utilization**
2008-09	260	68	171	0	499	**42**
2007-08	222	140	138	0	500	**42**
2006-07	301	76	72	08	457	**38**

The utilization of the training capacity is very poor at ZRTI, Udaipur. 2 special courses on Earthquake resistant construction and management of dismantling of structures and 2 special courses on concrete technology of 3 days duration are being organized at ZRTI, but no staff has been nominated for these courses.

9.4 Observations on the Capacity and facilities for training.

- No training for artisan category including multi-skilling is being provided.
- No civil engineering lab and workshop is available for practical demonstration.
- No staff for training of Bridge cadre staff is available. The training to Bridge cadre is imparted in the institute by the BRI/ABE's by making special arrangements from the field at ZRTI. Training modules are also not available at the institute for bridge cadre
- No course for drawing cadre is being conducted.

10.0 Monitoring of Training needs and involvement of divisional and HQ officers

- Sr.DEN(Co) is the in-charge of training at divisional level and CGE at HQ level.

- Presently staff due for refresher course is only being monitored through monthly PCDO as indicated in the table above. In the interaction with the faculty at DET and ZRTI, it was gathered that required attention is not being given to the training needs of group C and D staff at the division and HQ level.

- There was general impression that, more involvement of higher officials is required in creating the required facilities for effective training of Group C & D staff and also for full utilization of training capacity as well as for monitoring the quality of training at the DET/ZRTI's

10.1 Staff due for Refresher Course on NWR (Month:April,09)

Opening balance		Accrual during the month		Staff trained during the month		Staff due for refresher course at the end of the month	
Gr.C	Gr.D	Gr.C	Gr.D	Gr.C	Gr.D	Gr.C	Gr.D
22	129	34	110	34	159	22	80

11.0 Suggestions for Improvement of DET's

- Additional class rooms and hostel accommodation for capacity enhancement.
- Proper messing facility
- Basic minimum facilities for recreation. Provision of coolers in the class room and hostel.
- Provision of a small workshop for demonstration of small track machines and for training of artisan staff.
- Provision of computer, printer with internet connection and LCD projector
- More technical films in regional languages
- Training modules for works staff
- Uniform syllabus in all the DET's
- Minimum 2 instructors (1 from P.Way and 1 from Works side) at each DET

12.0 Suggestions for Improvement of ZRTI's

- Provision of an Engineering lab and a small workshop for practical demonstration. A standard list of equipments for lab and work shop should be laid down.
- Training in working with latest surveying instruments
- Training facilities for NDT testing
- Training modules for Bridge and artisan category
- Training courses for drawing cadre staff.
- Sufficient computers for training in IT

13.0 Training of clerical staff

- Clerical staff is at present given training only in establishment matters at Personnel training centre at Jodhpur.
- No training in works and stores matters is being given at present to clerical staff.
- A one week MDP course on works, stores & establishment and IT matters for clerical staff along with supervisory staff can be arranged at ZRTI's.

14.0 Special efforts made by various training institutes on Indian Railways to improve the quality of training.

14.1 DET/Bhusaval

1. Yoga classes for trainess.
2. Literacy training for illiterate staff
3. Training by audio-visual means
4. Courses for artisan staff started.

14.2 DET/SUR

1. Posters of Size 53X78 cm on different maintenance and safety related activities with pictures and description in hindi and marathi are provided in all class rooms, model room, conference hall and passages.
2. Fully equipped model room, demonstration yard and conference hall is provided.

14.3 DET/Vadodara

1. Training of works department staff is started and 199 Sr.Khalasi/Khalasi are imparted training.
2. Artisan staff trained through ITI/Vadodara. (37 Mason and 48 Black Smith)

14.4 CETA/Kanpur

1. Group discussion and quiz competition.
2. Study tour, practical demonstration in model room and model yard.
3. Imparting training in computer and IT applications.
4. Field demonstration of total station.
5. Multi-skilling course for artisans.
6. Standardized lecture notes prepared for each module
7. Training of Horticulture for supervisors at Forest Research Institute, Dehradun

14.5 ZRTI/Alipuduar

1. Website of ZRTI started from June,2007,
2. Training on **'FIRE FIGHTING'** is being imparted by trained instructors during initial, Refresher and Promotional training.
3. Training on Disaster management, Customer Care and Vigilance Awareness
4. Seminar on AIDS is conducted.
5. Procurement of various equipments for P.Way and Works model room for practical demonstration

14.6 ZCETI/Kacheguda

1. Skill upgradation training of Artisan staff from all the divisions at Construction Technicians Training Institute, Hyderabad. Total 80 plumbers, 69 carpenter and 78 masons were imparted training in modern construction at a cost of Rs.4.66 lakhs.

2. **Special courses on following topics are regularly organized.**

(i) Track maintenance practices in Heavy axle routes

(ii) Formation strengthening works in high density routes

(iii) Disaster management

(iv) Schedule of dimensions

(v) SOR and Standard specifications of Civil Engg. Works and latest IS Specification

(vi) Bridge Strengthening, instrumentation and under water inspection

(vii) Land Management

(viii) Safety at Site

14.7 DETC/Banglore

1. **Preparation of Visual Aid Posters on maintenance and safety related activities**.

(i) Gangman Personal safety

(ii) Gangman good and bad habits

(iii) Basic Signaling and protection

(iv) Action during emergency (Protection of track)

(v) Maintenance of track (Duties of Mate and Keyman)

(vi) Level Crossings

(vii) Patrolling of Track (Monsoon, summer, winter)

(viii) Rail lubrication and joints

(ix) SKV welding

(x) Gangman tools

(xi) Causes of human failure

(xii) Work spot protection

(xiii) Pre and Post tamping operations

(xiv) First Aid Charts

(xv) Disaster management charts

(xvi) Stacking of rails and sleepers

(xvii) Modern communications

(xviii) Track renewal

(xix) Duties of gangman

2. Hand books for literate gang man.

(i) Track maintenance practices in Heavy axle routes

(ii) Formation strengthening works in high density routes

(iii) Work Spot protection works

(iv) Duties of Mate, Keyman and Track man

(v) Personal safety book

3. Practical field video for demonstration

(i) Duties of gateman

(ii) Duties of Mate

(iii) Duties of Key man

(iv) Maintenance of PSC sleepers

(v) Gang man tools

(vi) Duties of Gang man

(vii) Pre and Post tamping operations

(viii) Family welfare of gang man

15.0 Suggestions received during the discussions with officers and staff for further improvement in the training of Group 'C' and 'D' staff.

- Networking of training institutes for optimum utilization of capacity and to avoid duplication of efforts.
- Competent staff are not encouraged to apply for the post of instructors
- Training of trainers for up gradation of their skills
- To simplify selection process of instructors
- Enhancement of teaching allowance to 30% to motivate competent staff to opt for posting in training institutes
- Nomination of staff for training especially for refresher courses is not satisfactory. Safety category staff to be taken of from duty if they are due for refresher course.
- Computerization of bio-data of all Engineering staff and nomination of staff for training as and when they become due for training. Presently no such data is being maintained by divisions and HQ office. The nomination of staff for refresher courses is left to the field supervisors.
- Out sourcing of training needs where in house facilities do not exist or they are inadequate. Some Railways have already taken initiative in training of artisans at ITI's and NICMAR/HYD
- Utilization of training capacity available in Mechanical Workshops for artisan category.