

GOVERNMENT OF INDIA  
MINISTRY OF RAILWAYS  
(RAILWAY BOARD)

New Delhi-110001,  
Dated: 26/10/10

No. 2010/CE-II/Meeting/1

The Principal Chief Engineers, All Zonal Railways.

CAO(C)/N/ECR, CAO(C)/S/ECR, CAO(C)-I/NR, CAO(C)-II/NR, CAO(C)/P&P/NR  
CAO(C), all 16 Zonal Railways (except ECR, NR),

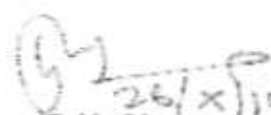
The Chief Engineer, Metro Railway, Kolkata

Sub: Minutes of PCEs/CAO(C)'s Conference held on  
29<sup>th</sup> & 30<sup>th</sup> September 2010.

Please find enclosed herewith the minutes of the above mentioned  
Conference.

This is for information and necessary action please.

Encl: As above in 29 pages

  
(P.K. Sharma)  
Director Civil Engg. (P)  
Railway Board.

Copy along with its enclosures to:

- 1) Sr. PPS/ME, PS/AM(CE), PPS/AM(W), PPS/Adv.(L&A), PPS/Adv  
(Project)
- 2) ED/Track-I, ED/Track-II, ED/TMM, & EDCE(B&S)/RDSO.
- 3) Director/IRICEN/Pune.
- 4) EDCE(P), EDCE(B&S)-I, EDCE(B&S)-II, EDTK(P), EDTK(M), EDTK(MC),  
EDCE(G), ED(L&A)-I, ED(L&A)-II, ED (L&A)-III, ED(W) & ED/Work(Plg.)

## Minutes Of PCE/CAO(C)'s Conference Held in Board On 29<sup>th</sup> & 30<sup>th</sup> September 2010

List of participants is placed at Annexure-I

EDCE(P) welcomed all the PCEs, CAO(C)s and other officers present in the meeting

### (A) Addresses

#### 1.0 Address by ME

- 1.1 During recent window trailing inspections of ME running in Nagda-Kota section of WCR was found very good even on bridges, level crossings and turnouts. ME instructed PCEs to improve sections on Nagda-Kota standards.
- 1.2 Board has recently circulated revised duties of SAG officers of Engineering Department. Concept of the THODs has been done away with. Railway should take action for implementation of the new system.
- 1.3 ME complimented the team associated with development and implementation of Track Management System and observed that the feedback from the Divisions where it has been implemented has been encouraging and the PWIs feel proud of using the TMS. He stated that the senior officers should also own the system and all the officers and staff should be encouraged to explore the system extensively to expedite the learning process.
- 1.4 The ship carrying the first RGM is due to be docked shortly. ME recalled the detailed review which he had on 6th Sept.'10 and stated that preparatory works on owning Railways such as SCR are progressing well but other Railways need to pick up preparatory works. He expressed confidence that with elaborate training and preparatory works, the rail grinding practice should be implemented successfully this time. This would be a technological leap in track maintenance and should go a long way in reducing failures, maintenance requirement and renewal requirements. He added a word of caution that mechanisation and sturdy track structure should not allow us to become complacent. The maintenance staff must remain vigilant and plan their works properly.
- 1.5 Mobile Flash Butt Welding on South Central Railway has been working very well. Other Railways should also share this experience and start implementing on their system.
- 1.6 It is seen that for bridges in the new projects CBEs are not getting involved right from the planning stage. Economy measures are to be taken but value engineering need not be ignored. We can compromise on aesthetics but not on safety and quality.

- 1.7 Inspection of steel structures is not up to the mark on most of the railways. IOW cadre needs to be strengthened. We should see that inspection registers for steel structures are maintained properly without any routine or sketchy entries. Inspections by IOW should be meaningful. IOWs are also responsible for inspection and maintenance of important steel structure and sub-structure of bridges which are directly related to safety and we should not allow this cadre to be weakened. Railways should identify activities of IOWs which are directly associated with the operations like flood control projects inspection and maintenance etc and use part of the cadre especially for these activities.
- 1.8 There are many redundant lines in the yards. We should identify such lines for dismantling and boost up earnings by way of scrap disposal. As because these are unnecessary burden on maintenance cost. PCEs & AOs should see that assets if not being used are surrendered and avoid unnecessary maintenance cost.
- 1.9 Railways should gear up progress of MFCs, World Class Stations and Land Management. Passenger Amenities Committee will soon go into Railways to review all these things.
- 1.10 Land boundaries to be ensured and should be well marked. The identification of surplus land for commercial exploitation has been sluggish on most of the Railways, CE (G) or SAG officer responsible for this job on the railway should take up the issue seriously and expedite action in the matter.
- 1.11 For new line and gauge conversion, the progress upto 2<sup>nd</sup> quarter is satisfactory. I hope this trend continues in coming quarters also. However, the progress on doubling front is slow and only 47 km has been completed.

## 2.0 Address by AM(CE)

- 2.1 Track Management System (TMS) is going to usher a complete change in working of Engineering department. There has been good response from SSE/JE(P.Way) and they have shown enthusiasm in adopting the TMS. Implementation on 6 pilot divisions has been completed and 4 more are planned to be covered under pilot project. He noted with concern that involvement of senior management of Zonal Railways has not been adequate and there are few hits from the Sr. Officers on the TMS side. The feedback is necessary for improving modules and debugging the programs. Senior management should get involved and spend time on the TMS. He further informed that the package for material management is being written. This will be first implemented for track machines thereafter it will be implemented on the P.Way side, starting with a few PWIs.

- 2.2 Progress of introduction of USFD testing with digital testers is not up to the mark in most of the Railways. Railways should take action for procurement of digital SRTs/DRTs.
- 2.3 South Central Railway or West Central Railway were asked to take up pilot project on mobile Flash Butt Welding. Though it has not started on West Central Railway but it is progressing well on South Central Railway. Other Railways should also make headway as per experience of South Central Railway.
- 2.4 AM/CE noted with concern that deep screening of point and crossing is not being carried out which is resulting into bad running in the yards. It is high time that mechanized deep screening of point and crossing is implemented by all the Zonal Railways.
- 3.0 Address by Adv(Projects)**
- 3.1 Adv/Project stated that no alignment should pass through either a reserve forest or Wild Life Sanctuary.
- 3.2 He also mentioned that there is no fund constraint for targeted projects and railways should ensure adherence to targets already fixed. Funds for the targeted projects will be made available but for non targeted works, Railway should plan activities as per allotment of funds. In fact, austerity should be adopted in all those projects which are to be completed in 3-4 years time.
- 3.3 For doubling and gauge conversion projects only long welded panels should be used. Flash Butt Mobile welding plants should be used for welding of single rails on new line projects only.
- 3.4 Additional fund will be made available to extent of plus 10% of the sanctioned detailed estimate.

## **(B) Discussion on agenda items**

### **1. Improvement to Mobility**

#### **1.1. Raising of Sectional Speed of Various sections**

- NR, NWR, ER, SER should expedite action for raising speed in nominated sections to 130 Kmph in first phase. Action for raising for complete route should be taken.
- NR should also plan for speed raising in Kanpur-Lucknow and Ambala-Chandigarh sections.
- Planning for increasing speed to 140/160 kmph should also be done by NCR, ER, ECR & WR.
- CR & NFR should plan more routes for raising of speeds.

## **1.2. Relaxation of Permanent Speed Restrictions (PSRs)**

- Progress of removal is slow on CR, ECR, ECoR, NCR, NWR, SWR and WR. This is mostly because removal/relaxation has been planned in the later part of the year. Railways should ensure that targets are achieved.
- CR, ER, ECR should try to target removal of more nos. of PSRs as they have a lot of scope in easy and medium difficulty category.

## **2. Mechanization of Track Renewals –**

- There has been improvement in percentage mechanization of relaying works during Apr-July 2010. During Apr-July'10, 40% of TSR(P), 65% of deep screening and 35% of turnout renewal have been executed by machines. Further, 59% of length deep screened by BCMs has been opened at 40 kmph. However, the following railways need to improve their mechanisation:
  - TSR(P) & ISD: ER, NER, NWR, SER, SWR and WR.
  - Deep screening of plain track: CR, ER, NR, SWR & WR
  - Turnout renewal: CR, ER, ECR, ECoR, NR, NER, SWR and WR
  - Opening of BCM sites at 40 kmph: CR, NCR, NER, SR, SCR & SWR.
- Some Railways such as SCR, NCR & CR have done good work in mechanised deep screening of turnouts by BCM. Other Railways should also improve their performance in this regard.
- PCEs should ensure that manual relaying is not permitted until optimum utilization of machine capacity is achieved. Sufficient machine capacity is available for complete mechanization of track renewal and deep screening works on A, B and D Spl Routes. Board has already issued instructions to all PCEs vide letter dated 17.2.2010 to implement complete mechanisation on A, B and D Spl. Routes from April, 2010 onwards. If any Railway needs TRT/PQRS to improve mechanisation of TSR(P), they should submit the requirement to Railway Board.

## **3. USFD Testing –**

- On overall basis the progress of USFD testing up to August 2010 is about 97%. However, the progress of testing on ER is 85% that on ECR is 78%, NWR is 89%, SR is 57%, SER is 95%, ECoR is 93% and that on SWR is 86%.
- Time and again emphasis was made from the Board that there should not be any deficiency in the USFD testing. The Railways should plan their

work in advance including outsourcing of USFD testing so that not a single section is overdue for testing.

- PCEs of SR, ER, SWR and ECR were specifically advised to take immediate step to make up the deficiency. It should be ensured that there is no deficiency/overdue for testing on the identified critical sections.

#### 4. Scrap Disposal –

- Progress of NCR & SR is much below the prop targets and that of ECR & SECR is also less than the prop targets.
- Progress of CR, ECR, SR & SCR is less than the last year progress up to the month of August.
- Railways were advised to report progress of scrap disposal through the TMS. In spite of repeated instructions complete entries have not been made by most of the Railways and data on TMS is not up to date. The position for Aug'10 (as downloaded from TMS on 27/09/10) is as given below;

SN	Railway	As per TMS	As per PCDO	%age
1	CR	3111.27	26072	11.93%
2	ER	12357.1	22570	54.75%
3	ECR	10308.25	11336	90.93%
4	ECOR	13491.03	11559	116.71%
5	NR	27480.21	42881	64.08%
6	NCR	6779.09	9308	72.83%
7	NER	15570.96	9943	156.60%
8	NFR	8504.74	8849	96.11%
9	NWR	154.24	23757	0.65%
10	SR	9508.1	10448	91.00%
11	SCR	15393.07	33916	45.39%
12	SER	11116.54	30495	36.45%
13	SECR	7886.56	22385	35.23%
14	SWR	10237.05	13249	77.27%
15	WR	27362.83	36743	74.47%
16	WCR	37459.53	30866	121.36%
	Total	216721.00	344377	62.93%



- Railways should ensure that scrap disposal entries are up to date as progress will be taken from TMS only.

## 5. Rebuilding of Distressed Bridges –

Position for 2010-11 upto Aug'10 is as under.

Rly	Bridges as on 01/04/10			Target 10-11			Progress upto Aug'10		
	SRSF	DRF	Total	SRSF	DRF	Total	SRSF	DRF	Total
CR	-	-	-	-	-	-	-	-	-
ER	1	-	1	-	-	-	-	-	-
ECR	3	4	7	3	4	7	-	-	-
ECOR	-	1	1	-	1	1	-	-	-
NR	-	4	4	-	3	3	-	-	-
NCR	-	1	1	-	1	1	-	-	-
NER	-	4	4	-	4	4	-	-	-
NFR	-	-	-	-	-	-	-	-	-
NWR	-	-	-	-	-	-	-	-	-
SR	2	-	2	2	-	2	-	-	-
SCR	-	1	1	-	1	1	-	1	1
SER	-	5	5	-	3	3	-	-	-
SECR	-	1	1	-	1	1	-	-	-
SWR	-	-	-	-	-	-	-	-	-
WR	1	2	3	1	2	3	-	2	2
WCR	-	1	1	-	1	1	-	-	-
Total	7	24	31	6	21	27	-	3	3

- Three bridges in NER have been subsequently dropped from the list of distressed bridges by the railway
- Special attention was drawn of ECR, NR, SR & SER to pull up progress

## 6. Elimination of Unmanned Level Crossings –

- Manning of UMLCs: Hon'ble MR has announced manning of 4000 unmanned level crossing during 2010-11. Progress achieved is only 95 and at 75 places infrastructure is ready but not manned for want of manpower. Railways should complete infrastructure work without waiting for manpower arrangement. It is appraised that, a proposal for creation of post of gateman without matching surrender and early posting / recruitment of trackman to be posted as gate man, is presently under the consideration of Board (MS). On some of railways manning plans are not being signed by Operating Department on the plea that it would increase workload of ASM. Rlys have been advised that there is no such instruction. Letter to this effect has been issued. All qualifying unmanned gates must be manned on priority.

- In compliance to the Budget Pronouncement and IR Vision 2020, a five-Year-Master-Plan has been prepared for elimination of all unmanned Level Crossing gates by the year 2015 by using various means as given below;

Method of Elimination	RUR/ROB	Diversion road	Closure of one UMLC by manning next one	Closure of low TVU UMLC	Manning, if it cannot be closed by other means	Total
Nos. Identified	1646	984	412	1834	6359	11235
Progress	39	16	1	205	95	356 against the target of 2326

- These items need close monitoring and should be implemented on priority, being a safety measures item at level crossings.

## 7. Construction of ROB/RUBs --

**ROBs:** The position is as under;

Status	Cost Sharing works	Deposit Terms	BOT	GC New Line, Doubling	NHAI (as per NHAI)	Total	LCs with TVUs > 1 lakh but ROB not sanctioned
Sanctioned	924	205	55	105	545	1834	1407
Completed upto 01.04.10	149	29	8	19	145	350	
Complete (2010-11)	37	12	5	34	26	114	
Cumulative Completed	186	41	13	53	171	464	
Balance	738	164	42	52	374	1370	

- The progress of ROB/RUB has picked up in recent past. However, there are huge backlog in construction of ROB. 319 ROB/RUB works, sanctioned prior to 2006-07 are yet to be completed. GADs have not been approved in 195 cases. Works are in progress only at 223 sites. Detail Estimates and tenders have not been finalized in many cases. At 5 places, ROB approaches have been completed but bridge portion is still incomplete and at 28 places, Bridge portions have been completed but approach portion is yet to be completed. There is need to put construction of ROB/RUB on fast track, irrespective of being constructed by NHAI, DFC, BOT or on cost sharing and Deposit basis..



- Construction of ROB on Single Entity basis has been approved for Tamilnadu, UP, Punjab, Karnataka, West Bengal and Gujarat. Recently, SECR and NWR have approached for extension of single entity scheme. Unfortunately none of the railways has finalized construction of ROB on single entity basis. Railways should utilize this instrument to offload their workload. Similarly, in case of Govt. of Gujarat, ROB construction on Annuity based payment has been approved. Similarly, ROB construction on PPP basis with 40% viability Gap Funding on cost sharing basis between Railways and the State Govt. has been approved. But there is no headway in construction of ROB under these two schemes. Railways should pursue the matter with the State Govt.
- In order to expedite the construction of ROB, railways have been directed to hold monthly meeting of all agencies involved to in construction of ROB, adopt pre-cast and composite steel construction, use high capacity crane for launching girders and expedite approvals for GAD, TAD, CRS sanction.

#### **RUBs and subways:**

- General Managers have been empowered to sanction ROB/RUB works costing upto Rs.2.5 Cr in each case. Railways should sanction all qualifying subways during the year 2010-11 & 11-12 so that in next 3 to 4 years, subway works can be completed. Detailed estimates and tenders should also be finalized on priority. Railways should do waterproofing of RUB, if drainage is the issue and cutoff ingress of water by use of retaining wall, ramp covering, rain water harvesting, etc. There is need to encourage construction of LHS/RUB. Recently, railways have decided to facilitate construction of subways being constructed through NREGA fund (National Rural Employment Guarantee Act) by way of waiving various charges like departmental, supervision, maintenance, etc. It is presently applicable in case of Rajasthan Govt. This scheme can help in stopping trespassing where District Adm. have constructed roads upto railway track without constructing RUB or LC gate on deposit terms. Railways should approach State Govt. like NWR in this regard. Railways should propose and construct subways along with ROB so as to avoid problem of closure of LC gate at later stage.
- Fund utilization has improved in past few years, but continues to be below 60%. There is no fund scarcity. Railways have been given fund as per their projected requirement. The same should be monitored. This issue crops up in the Parliamentary Questions and also being monitored through Standing Committee.

#### **8. Trial of New Materials –**

The position of trials of new materials is as under:

SN	Item	Railway where trial is to be done	Date of order for trial	Target	Remarks
----	------	-----------------------------------	-------------------------	--------	---------

SN	Item	Railway where trial is to be done	Date of order for trial	Target	Remarks
1.	Composite Rail Pad				Approved for adoption. Zonal Railways to procure & use.
2.	G-J Clip				Approved for adoption. Zonal Railways to procure & use.
3.	Thermoplastic Elastomer Rail Pad	N, NC, ECo, SC & C	29.5.03	30.08.10	CR- laid in Oct/Nov. 2009. P.O. placed by N.R.
4.	Improved rail pad	All Zonal Railways	05.12.08		RDSO to install Machines for Impact Attenuation & Inclined Repeated Loading Test
5.	Nylon cord reinforced GRSP for turn outs	All Zonal Railways			All the firms (part I & Part II) approved for 6 mm GRSP advised to submit samples to RDSO for testing
6.	Rail pad developed by M/s Rawatsons for Turnouts	N, NC, ECo, SE, W, C & SC	07.04.08		Performance from Zonal Railway awaited.
7.	Insulated Metal Liner developed by M/s Rawatsons	ECo, S, SE, W, C & SC	21.08.07	30.08.10	SER have reported satisfactory performance.
8.	ERC MK-V	WC, W & ECo	01.06.07	30.09.10	Zonal Railways have sent the report to RDSO
9.	G-Clip developed by M/s Logwell Forge Ltd	S, SE, SEC & SW		30.9.10	Zonal Railway have sent the report to RDSO.
10.	PSC Sleeper for 25 t axle load	ECo, SE, SC & SW	27.01.09	30.9.10	Zonal Railway to expedite trial
11.	Optimised design of PSC sleepers for 22.5t axle load	All zonal Railways		31.10.10	Zonal Railway to expedite.
12.	Insulated fittings for steel channel sleeper on bridges in track circuited areas	i) M/s Rawatsons, Kolkata design in all zonal Railways. ii) M/s Shree Bihariji Engg. Corpn, Kolkata in N.Rly.			i) P.O. placed by CR  ii) CR- laid in May-Aug 2006. Performance is satisfactory

## 9. Accrual of Earnings from Land Resources –

The position for 2010-11 up to Aug 2010 is as under;

Railway	Target	Prop. Target	(Figure in Rs. Cr)
			Actual Earnings
CR	55	22.92	17.51
ER	30	12.50	9.99
ECR	25	10.42	9.87
ECOR	30	12.50	4.13
NR	120	50.00	74.66
NCR	35	14.58	6.13
NER	25	10.42	6.71
NFR	30	12.50	7.74
NWR	50	20.83	8.22
SR	60	25.00	14.84
SCR	40	16.67	21.79
SER	30	12.50	11.36
SECR	15	6.25	3.23
SWR	30	12.50	2.39
WR	45	18.75	21.54
WCR	30	12.50	7.94
METRO	1	0.42	0
<b>TOTAL</b>	<b>651</b>	<b>270.83</b>	<b>228.05</b>

- The target of earning from land resources (other than RLDA) for 2010-11 is Rs.651 cr. The actual earning from land resources up to Aug-2010 is Rs. 228 cr only.
- On ECoR, NCR, NWR, SECR & SWR, earnings are less than 60% of proportional targets. These Railways should make extra efforts to achieve the target.

## 10. Adarsh stations, Multifunctional complexes & World Class Stations –

### 10.1. Adarsh Stations –

- 378 Stations were identified for development as Adarsh Stations in 2009-10.

- So far, 341 stations have been developed as Adarsh Station. Development of remaining stations as Adarsh station should be completed by 31.12.2010.
- Additional 206 no. of stations have been identified for development as Adarsh stations during 2010-11. Railway should ensure that these stations are developed as Adarsh station by 30.6.2011.
- PCEs should personally monitor progress of Adarsh Stations and ensure that targets are met with. Monthly progress report on progress made should be sent to Railway Board.

## 10.2. Multi-functional Complexes –

- 67 stations were identified for development of Multi-functional Complex (MFC) during 2009-10.
- Work of development of these MFCs has been entrusted to Railways & PSUs as under;

IRCON - 24 Stations

RITES- RLDA - 20 Stations

RVNL-RLDA - 04 Stations

RLDA - 06 Stations

Zonal Rlys. - 13 Stations.

- All PSUs/Zonal Railways have been advised vide Board's letter dated 04.12.2009 to complete the works within the time lines.
- PCEs should monitor progress of development of MFCs entrusted to Railways.
- In case of development of MFCs by PSUs, PCEs should ensure early finalization of site, entrustment of land/air space to RLDA and facilitate removal of encumbrances at the earliest.
- 93 stations have been further identified for development of MFC. All efforts should be made to expedite the construction of MFC's.

## 11. Manpower Planning -

### Vacancy Position:

- As per information mentioned in PCDOs of August 2010, the status w.r.t all categories, as applicable to Engg. Deptt. Was as under;
 

(i) Sanctioned staff strength	2,88,972
(ii) Staff on roll	2,19,206
(iii) Vacancies	69,766
(iv) Indents placed	35,129

- While Zonal railways have placed indents only for about half the vacancies as existing, action is required to be taken w.r.t. anticipated vacancies also. Necessary action needs to be taken on a systematic and regular basis.
- Further, every year many new works are sanctioned by Railways through Works Programme (by Railway Board, GMs & DRMs). The Executing Agencies on Zonal Railways/PUs get estimates prepared, vetted & sanctioned with provisions for Establishment Charges, Tools & Plants, Contingency etc. but in most of cases, these remain unutilized especially w.r.t. Establishment and Tools & Plants.
- While nos. of contracts are getting increased, availability of supervisors for each work site/activity is essentially required for proper quality control and timely execution. It is possible only when supervisors (both for Works and P.Way sites) are available with Railways. Zonal Railways (PCEs & CAOs) should have proper accountal of work-charged provisions in various sanctioned estimates and creation of work-charged posts alongwith placing indents & recruitment through RRBs should be monitored on regular basis.
- Current status on the subject should be communicated to Railway Board by PCEs & CAOs within next one month.

#### **Track Machine Staff:**

Railway Board has already advised the programme of procurement of Track Machines and asked the railways to create posts and complete recruitment and training of staff. Indian Railways are working towards complete mechanization and renewal activities. Towards this goal, induction of about 60-70 machines is being carried out every year. However, creation of posts, recruitment and training of staff is not keeping pace with the induction of machines. Availability of adequate and trained staff is essential for keeping the sophisticated machines in good gettle. As on Aug'10, there is 20% shortfall in creation of posts whereas 25% of posts already sanctioned are lying vacant. Overall the number of sanctioned posts has increased from 8,259 on Jan'10 to 8,719 on Aug'10. ECoR, NR, NER, NFR, SER, SER & WR have done significant progress in this regard whereas CR, SR and SWR have done marginal improvement. In the recent centralized employment notices, no indent for SSE/JE(TM) has been placed by CR, ECoR, NR, SWR & WR, whereas no indent for Technician (TMM) has been placed by ECR, ECoR, NER, SR, SCR, SER, SECR & SWR. PCEs should expedite creation and the filling of posts for track machines.

#### **Human Resource Development:**

- Due emphasis needs to be given to Human Resource Development, i.e. Selection/Promotion, Training and Placement.

- As per information available, Engg. Deptt. is having 50 nos. of Divisional Training Centres for P.Way & Bridge staff on IR system. Zonal Railways should get these institutes inspected by SAG officers and consolidated report for augmentation of all Civil Engg. Training Institutes/Schools/Centres for P.Way staff, Artisan staff including Supervisors both for 'Initial' and 'Refresher' courses should be worked out.
- Railway Board would be standardizing the training modules, infrastructural requirements & facilities on the subject of 'Training & Human Resource Development' based on inputs and feedback from Zonal Railways. This should be sent by Zonal Railways PCEs) by the end of Oct. '10 positively.

## **12. Additional Agenda Items**

### **12.1. Provision of Man Refuge on through open web girder bridges -**

- To improve safety of men on the bridge, RDSO has issued a provisional drawing No. 'CBS 0028 Alt.-1' for provision of Man Refuge vide letter No.CBS/Pathway dt.23.9.2010.
- A Power Point presentation on salient features of 'Man Refuge' was also given by EDB&S/RDSO.
- Man Refuges are required to be provided on priority by the railways as there have been increasing number of incidences of men run over on bridges. Railway should firm up their action plan, execute the works and apprise Board.

## **(C) Discussion by EDs:**

### **1. Items of EDTK(M)**

- All the PCEs were informed that Optimised design for 22.5t axle loads, using 16 wires (in place of existing 18 wires), and increasing the prestressing force from 70% to 75% and changing the mix design from M-55 to M-60 has been finalised. This design has been validated by lab testing in RDSO. All the Zonal Railways have been advised to manufacturing 20 sleepers in each Concrete Sleeper Plant. 10 Sleepers will be tested in the lab in lab in to watch their performance in actual field conditions. Testing/Trials scheme has also been issued by RDSO. This should be expedited and reports sent to Railways board with a copy to ED/Track-II/RDSO.
- Sleeper design for 25t axle load has been finalised. ECoR, SER, SCR & SWR have been nominated for conducting trails. Contracts have been finalised by all the four Railways. Trials may be expedited.



- All the PCEs were requested to review the requirement of PSC sleepers including requirement for Construction projects for the year 2010-11 and submit the revised requirement. Production of PSC sleepers may be regulated accordingly.
- All the Zonal Railways were requested to assess and submit requirement of PSC sleepers for 2011-12 & 2012-13. Reply from CR, ER, ECoR, ECR and NCR is awaited. This may be expedited.

## 2. Items of EDCE(G)

### i. Works Programme 2011-12 (Web-based Soft Processing):

- Railway Board have developed a web based software – "Indian Railways Projects Sanctions and Management (IRPSM)", which would generate and process current Works Programme 2011-12, thereby reducing huge cost and time of voluminous books and manpower on IR System.
- Presentation was given by EDCE(G) when the on-line processing was demonstrated & explained. All GMs have already been conveyed instructions and passwords to the application. Necessary action may be taken accordingly as per time schedule advised.

### ii. Wheel Impact Load Detection ('WILD') System:

- Presentation on Wheel Impact Load Detection ('WILD') System was given by EDCE(G) when all the features of the system were explained with live, on-line & real-time system for monitoring through web-based application.
- Timely detection of defective rails & welds has always been an area of concern. Analysis of various rail/weld failures infers that in quite sizeable number of cases, failure locations could not be identified through existing USFD mechanism & such failures are mainly due to fatigue because of hammering by impact loads from defective rolling stocks which are not identified, detected and attended in time.
- 'WILD' system, so developed indigenously by RDSO-IITK, is having incorporation of latest advancements of instrumentation & information technology, when a defective /culprit rolling stock/wheel is objectively detected on real-time and on-line basis.
- After passing of each train, processing of acquired data is done through highly sophisticated, reliable & validated software and exception report for identified defective wheels/axles is generated within a minute. This report is immediately transmitted to web server and to nominated locations in control room & maintenance depots through RF signals; thus, making the concerned railway officials aware of such objective identification & timely remedial actions, preventing damages to both rails & rolling stocks.
- In Corporate Safety Plan (CSP) 2003-13 of IR, presented by Hon'ble MR, it was committed that WILD systems, so developed by RDSO-IITK shall be installed at 260 locations on IR on approaches to various train examination

points for safety of track as well as rolling stock as per RSRC recommendations.

- Hon'ble MR, Railway Board & CCRS have already issued many instructions for installation of adequate nos. of WILD systems on IR. Nine systems have already been installed on ER, ECR, ECoR, SR, SER, SCR, SECR & SWR. Seven 'WILD' systems are further under installation & commissioning at Itarsi, Bina, Ajni, New Katni, Nagpur and Barwad stations.
- It was decided by Member Engineering that PCEs & their team should make full use of available 'on-line' & 'real-time' information of objective detection of culprit rolling stocks through existing WILD systems for preventing damages to track structure. Also, 'WILD', the system of 'assets reliability' and 'safety' is more useful to Civil Engineers and many more such systems should be installed chargeable to track renewal estimates by respective Zonal Railways. Such little investment will give dividend and would be beneficial to IR with reduced maintenance & replacement cost of both rails & rolling stocks and more importantly prevention of derailments, which at time cause loss of human life as well as resources & assets.

iii. Indian Railways Unified Standard Schedule of Rates and Specifications:

- Railway Board have already communicated on 14.1.2010 approval with Finance concurrence on the documents – 'Indian Railways Unified Standard Schedule of Rates and Specifications' for Works and Materials. Zonal Railways were asked to collect market rates of materials, labour, equipments etc. and input to be given in the approved Software for generating and printing their respective 'Unified Schedule Of Rates'. While few Zonal Railways have already completed this exercise, remaining Railways must also complete it by end of Oct '10.
- CD containing latest software for IRUSSOR was further handed over to all PCEs by EDCE(G) for generating & printing their Railway's USSOR 2010. Issues, if any may be discussed & sorted out with EDCE(G).
- Document on Unified Standard Specifications is under print. PCE/NR may expedite finalization of contract of printing the books, so that these could be supplied to all Zonal Railways/PUs without delay.
- Similar exercise for 'Unified Standard Schedule Of Rates For P.Way Items' is under process. Necessary inputs/help as requested by EDCE(G) need to be arranged by PCEs for early finalization of the document.

iv. Contracts & Arbitrations : The following issues were deliberated and recommended as under :

(i) Joint Venture –

- As per extant procedure, one of the members of JV firm must have satisfactorily completed one single work for a minimum value of 35% of advertised tender value. However, there is no requirement for other

members of JV, as far as technical eligibility criteria are concerned. Railways are facing contractual problems due to sleeping partners in JVs specially in single item works contracts, e.g. ballast supply etc. where execution of contracts is a problem due to no experience of other JV partners.

- The issue was deliberated and it was proposed that in single item works contracts of ballast supply etc., each JV partner should also have satisfactorily completed one single work for a minimum value of 10% of advertised tender value. Such a provision will help IR System to have reasonable competition in tenders as well as participation by genuine contractors only.

(ii) Two Package System Of Tendering –

- In terms of latest instructions of Railway Board (no. 94/CE-I/CT/4, dated 11.6.03), two packet system of tendering may be adopted for all values of tenders, but there is general reluctance with Zonal Railways to 'two packet system'. It was, therefore, opined that 'two packet system' may be made mandatory in all tenders valuing more than Rs. 20 crore for participation by genuine contractors. However, for deviation to this provision, i.e. 'single packet tendering' in contracts valuing more than Rs. 20 crore may be done only with the approval of SAG officer.

(iii) Formation of Joint Venture –

- As per existing provisions, Joint Ventures may be formed for tenders valuing more than Rs. 5 crore. Such a provision was formulated about six years earlier. With passage of time, there is need to enhance this limit to at least Rs. 10 crore.

(iv) Arbitration Cases –

- Zonal Railways are presently having about 3500 pending arbitration cases with annual average arising & disposal of about 500 & 300 cases respectively. While efforts are being made for setting up of 'Indian Railways Arbitration Tribunal' for facilitating healthy arbitration culture for resolution of disputes arising out of works contracts, there is need for regular monitoring of disposal of pending arbitration cases alongwith possible efficient contract management and improved contract policies & instructions.
- All PCEs and CAOs(C) should send no. of pending cases as on 1<sup>st</sup> October 2010 with nos. accrued & disposed during 2009 and 2010 and close monitoring for disposal needs to be ensured.

v. Use Of Innovations & Technological Advancements In Civil Engg. Applications :

Many day-to-day activities of Civil Engg. functioning can be improved, modernized & optimized with the use of technological advancements in various fields including that of new Building Materials, Concepts & Solution with integration of Information Technology & Instrumentation. Feedback on projects conceptualized, developed & implemented should be reported through monthly PCDOs by PCEs & CAOs.

### 3. Items of Dir(TMS)

- Presentation and online demonstration of TMS was made in PCE/CAO(C)'s Conference by CE/TMS, N.Rly and Dir/TMS. The following items were discussed:
  - (i) Acceptability of TMS in six pilot divisions has been because of easy accessibility through internet and avoidance of duplicate effort by doing away with registers. For successful implementation of Store module also the duplicity of maintaining store registers/ledgers in physical form and in electronic form must be avoided. Since store transaction has monetary implication, its security, reliability and accuracy should be thoroughly checked.
  - (ii) Mode of providing network connectivity to field officials i.e. ADENs, SSEs and JEs was discussed. It was decided that for faster and economical implementation of TMS in vast railway network broadband internet connectivity to ADENs and SSEs and mobile data card to JEs, SSEs and ADENs is the best option.
  - (iii) Railways should ensure prompt/regular and correct entry of work done and inspections into TMS. More and more reliance should be put on TMS rather than paperwork. Any gaps in the TMS may be brought out so as to improve the TMS.
  - (iv) PCE/NWR and SR suggested for default reporting format for higher level management.
  - (v) It was suggested that TMS should be GIS enabled. GIS enabling shall make TMS much more user friendly to higher management and more useful for field people.
  - (vi) AMCE informed Railways that work has been sanctioned in year 2010-11 for implementation of TMS in all balance divisions. Detailed estimate is under preparation in NR. PCE/SER suggested that ADRA Division should be included in pilot project of TMS implementation in six division for its speedier implementation as momentum has already developed. Similar demands were raised by PCE/ECR for Mugalsarai Division, PCE/WR for Ratlam Division, PCE/CR for Bhusawal Division, PCE/NWR for Jaipur Division, PCE/SCR for Hyderabad Division, PCE/ER for Asansol Division. To have participation of Eastern, Western and Central parts of railways in pilot project, it was decided that Mugalsarai, Asansol, Adra, Ratlam and Bhusawal Divisions should also be taken up in pilot project for implementation of TMS.

**(D) Issues raised by PCEs:**

- Special allowance / incentives should be given to gateman.
- GM of the railways should be empowered to sanction subways in lieu of unmanned/manned level crossing gates sanctioned in new line construction estimates.
- Various charges applicable in case of ROB need review being on higher side.
- PCE/NF Railway brought out problems due to inadequate powers for AMC and repairs of track machine. ME directed that the case should be processed for enhancement of the same.
- PCE/SER stated that block corridors are getting reduced due to introduction of new passenger trains in the existing maintenance corridors. Engineers are not being consulted before introduction of trains in the maintenance corridors. ME stated that the issue should be taken up at the respective GMs level.
- PCE/NR stated that one BCM from NR has been diverted to NWR and the target of NR should be revised accordingly. ED/Track(MC) stated that the same will be processed.
- PCE/ER mentioned that WAP-7 loco is being used for Rajdhani trains for speed up to 140 kmph. During a recent accident Enquiry, PHOD Committee has found that this loco is not fit for speeds above 110 kmph since bogie used in this loco is fit for speeds up to 110 kmph only. Basically it is a WAG bogie. These loco should be withdrawn from Rajdhani rakes. In this regard, Eastern Railway should send a report to RDSO and Board.
- There have been several incidents of hitting signals and electric masts by BCNHL wagons. These are 36m wide and at times bulging of the door and inaccuracy in manufacturing leads to infringement of ODC and hitting of masts/signals.
- BLC wagons are prompt to derailment because of coupling problems. This Issue has already been brought to the notice of RDSO and Mechanical Dte.
- The issue of running of longer trains without CRS sanction was also discussed. The running of such trains should be limited to trials in few sections of some Railways. Regularisation or generalisation of such running has to be after CRS sanction.
- The data of all the trains passed through the 9 WILD systems commissioned on IR is available on the website [www.irwild.net.in](http://www.irwild.net.in)



Engineering Department should keep a watch on critical alarms and action being taken thereafter. To access the website necessary password can be taken from RDSO. JPO on follow up action to be taken in case of alarms of WILD has already been circulated to Railways vide Board's letter no. 2002/M(N)/960/1 Pt dated 29/07/08. A copy of the JPO has again been sent to PCEs vide Board's letter no. 2009/CE-II/TS/13 dated 06/10/10.

- PCE/ER also requested that the work of MFCs should be coordinated by Engineering department the views of the other PCEs were also on these lines.
- PCE/CR raised the issue of right sizing and bench marking for P.way cadre. ME clarified that the figures in the E&R booklet are only for guideline and not for implementation.

**(E) Issues raised by CAOs:**

• Quality control of RVNL works:

- CAOs mentioned that mechanism should be devised to check the various aspects of quality control measures taken by RVNL.
- In some Railways plans and CRS papers are required to be signed by Construction Officers even though after commissioning of the projects the assets have to be taken over by Open Line Organization. This anomaly is required to be removed. CRSs are insisting on signature of Railway Officers on bridge design/plans before CRS's inspection. It was requested by Zonal Railways that CRS should be advised to treat RVNL at par with CAO's organization as in construction organization of Railways, such document are submitted under signature of executing engineers & design engineers of construction.
- It was decided that a coordinating mechanism should be evolved so that RVNL may coordinate with Zonal Railway for approval of plans, NI working and provision of machines etc. Besides, regular coordination meeting/progress review meeting should be held with RVNL.
- CAO/SR submitted that Angamali-Sabarimala line is costing Rs.1200 Cr. The cost of land in Kerala State is extremely high and it is about Rs.4 Cr per km which is normally the cost of construction of a NL per km. A decision needs to be taken whether to continue this project since it has not yet started.
- Erection of electric poles by State Electricity Board is permitted at very nominal rates but for BEST (private electric supply agency of Mumbai) license fees @ %age of market value is required to be paid which is very high. Since BEST is providing services which are similar to the services being provided by State Electricity Boards in other areas,



erection of poles by BEST should also be permitted on charges which are prescribed for other State Electricity Boards.

**(F) Presentation on Mechanisation of linking of track at Construction sites:**

- Shri Manoj Arora, Sr. Prof. IRICEN made a presentation regarding various methods for mechanisation of linking of track and deliberated pros and cons of various systems. EDTk(MC) enumerated various options available as under:-
  - i) PQRS sets are available. Some of these sets can be diverted for construction sites.
  - ii) Sleeper layer can be procured under the sanctions available for further procurement of PQRS.
  - iii) Russian TRT can be diverted for construction sites.
  - iv) Board's instructions for using contractor's portals for mechanised linking of track at construction sites are already available for taking up pilot projects.
  - v) New Track Construction Machine (NTC) could be either procured by Railway or a long term works contract could be given with contractors' NTC. ME stated that a long term contract with contractors NTC would require an assured outgo. Use of New Track Machines would require detailed planning in terms of readiness of sites and actual calendar for its movement from one side to another side.
- CAOII/NR stated that it is possible to carry out linking upto 200 km per annum with NTC. Labour requirement is very low. Due to the high output & low labour requirement, the unit cost per km of linking is quite economical, besides high quality compared to other systems.
- The various options need to be explored further and CAOs may give their suggestions/scheme for mechanisation of linking.



## List of Participants

## A. From Railways

Open Line	Construction
1. Sri P. K. Saxena, PCE/CR	1. Sri K. K. Sharma, CAO/C/CR
2. Sri G.C. Agarwal, PCE/ER	2. Sri A. K. Mittal, CAO/C/2/ER
3. Sri G.S. Tiwari, PCE/ECR	3. Sri Madhuresh Kumar, CAO/C/S/ECR
4. Sri A.K. Gupta, PCE/INR	4. Sri Pramod Kumar, CAO/C/N/ECR
5. Sri A. Shevare, CTE/NCR	5. Sri Dharm Singh, CAO/C/NR
6. Sri Manoj Kumar, PCE/NER	6. Sri Surinder Kaul, CAO/C/P&P/NR
7. Sri T. Gupta, PCE/NFR	7. Sri R. K. Gupta, CAO/C/III/NR
8. Sri H. K. Jaggi, PCE/NWR	8. Sri S. K. Jindal, CE/C/NCR
9. Dr G. Narayanan, PCE/SR	9. Sri Dharmpal, CAO/C/NER
10. Sri Pradeep Kumar, PCE/SCR	10. Sri Radheshyam, CAO/C/NFR
11. Sri B. P. Khare, PCE/SER	11. Sri Santokh Singh, CAO/C/NWR
12. Sri V.K. Sangal, PCE/SECR	12. Sri R. Ramanathan, CAO/C/SR
13. Sri D.G. Diwate, PCE/SWR	13. Sri S. K. Sharma, CAO/C/SCR
14. Sri V. Srihari, PCE/WR	14. Sri Sudhir Mittal, CAO/C/SER
15. Sri C. P. Tayal, PCE/WCR	15. Sri B. D. Kumar, CAO/C/SECR
16. Sri J. K. Verma, CE/Metro, Kolkata	16. Sri S. S. Narayanan, CAO/C/SWR
	17. Sri Subodh Jain, CAO/C/WR

## B. From Other Organizations

RDSO	Others
1. Sri Sonvir Singh, ED/Track-I/RDSO	1. Sri A. K. Goel, Dir/IRICEN
2. Sri A. K. Singhal, ED/Track-II/RDSO	2. Sri Pankaj Jain, VC/RLDA
3. Sri A. K. Pandey, ED/TMM/RDSO	
4. Sri M. K. Gupta, ED/B&S/RDSO	
5. Sri A. K. Singhal, ED/Track-II/RDSO	

C. From Railway Board

1. Sri R. Chopra, ME
2. Sri S. K. Malik, AM(CE)
3. Sri Chander Parkash, Advisor(Proj)
5. Sri B. D. Garg, EDCE(P)
6. Sri Alok Kumar, EDCE(G)
7. Sri V.K. Govil, EDCE(B&S)
8. Sri A. K. Srivastava, EDCE(B&S)-II
9. Sri Satish Kumar, EDTK(M)
10. Sri N. Chopra, EDTK(P)
11. Sri A. K. Lahoti, EDTK(MC)
12. Sri J. Rai, ED(L&A)-I
13. Sri D. R. Gupta, ED(L&A)-III
14. Sri Vinay Singh, ED/W
15. Sri Rajiv Chaudhary, ED/W(P)

