

**Government of India
Ministry of Railways
Research Design & Standards Organisation
Manak Nagar, Lucknow – 226 011**



भारत सरकार – रेल मंत्रालय
अनुसंधान अभिकल्प और मानक संगठन
मानक नगर, लखनऊ – 226011

टेलीफोन : (0522) – 2465165
फैक्स : (0522) – 2452494
edswagon@gmail.com

No. : MW. WMG 7

Dated : 05/06/2014

All Concerned

Sub : Minutes of the 7th Wagon Maintenance Group Meeting held on 24th and 25th March 2014 at Ketti, Southern Railway
Ref : Railway Board's letter no. 2009/M (N)/951/34 dated 28/05/2014

The Minutes of the 7th Wagon Maintenance Group Meeting held on 24th and 25th March 2014 at Ketti, Southern Railway, as approved by Railway Board, are enclosed for information and necessary further action please.

Enclosed: As Above (19 Pages)

SMK
5/6/14
(Sanjay Kumar)
Executive Director Standards (Wagon)



MINUTES

OF

THE 7TH MEETING OF

WAGON MAINTENANCE GROUP

Held At

KETTI, SOUTHERN RAILWAY

MARCH 24TH & 25TH, 2014

RESEARCH DESIGNS & STANDARDS ORGANIZATION
MINISTRY OF RAILWAYS
LUCKNOW – 226 011

INDEX

S.No.	Description	Page No.
I	Welcome address	3
II	Keynote address by MM	3 – 4
III	Address by AM (ME)	4
IV	Agenda Items	
1.	Issues related to couplers	5
2.	Issues related to BCNHL wagons	6
3.	Issues concerning LSD and APM in Wagons	7
4.	Issues related to CTRB	7 – 8
5.	Rehabilitation of BOXN wagons with stainless steel panels to BOXNR	9
6.	Issues concerning BOBRN Wagons	10
7.	Subsequent ROH of BOXNHL wagons	11
8.	Issues related to bogies	11 – 13
9.	Failures of center pivot in BVZI Brake vans	13
10.	Hogging of BVZI Wagons	14
11.	Welding failure of side stanchion in BOXNHL wagons	15
12.	Examination of Privately owned wagons on other than nominated points	16
V	Other issues raised by Railways	17
VI	List of participants	18 – 19

**Minutes of the 7th Wagon Maintenance Group (WVG) meeting held at
Ketti, Southern Railway on 24th & 25th March, 2014**

I. Welcome Address:

CME/S. Rly. welcomed MM, AM(ME) & other participants in this meeting.

II. Keynote address by MM

1. All managers are agents for change and should set up such systems such that all their subordinates know their roles and the unit runs on its own as a system.
2. It is important that the manager ensures that each unit under him adopts the correct practices and that there is a feedback mechanism available to correct any incorrect practices.
3. The performance of various field units is very different. Teams should be sent to better performing units to standardize best practices in each unit.
4. The wagon ineffective has marginally increased from 2.98% in 2012-13 to 3% in 2013-14. However, even a small increase in ineffective translates to a large number of wagons and all out efforts should be made to reduce wagon ineffective.
5. The overall ROH outturn in 2013-14 was 7.4% higher than last year. However, CR has increased their ROH outturn by 32%. All railways should identify ways and means to increase their POH and ROH outturn by improving productivity.
6. There is a decrease in equipment failures in 2013-14. The hot axles have decreased by 12% and train partings have decreased by 29%. However, there is no reason for complacency since these failures are still far too many and need to be drastically reduced.
7. The comparative performance of hot axles in wagons POHed in various shops shows a substantial variation wherein CTRB failures within 2 yrs. of POH per 1000 wagon outturn for Raipur is only 1.2 while the same figure for Jagadhri is 12.5. Each workshop showing inferior performance needs to compare their practices to the best performing workshops in order to improve.
8. It is observed that Railway Board and RDSO have issued a number of letters on reducing hot axles in 2012. These need to be acted upon by railways. The action plan to reduce train partings should also be implemented by railways.

9. There is a shortage of wagon POH capacity in IR due to which wagons have to wait for POH. There are several sanctioned works for increasing wagon POH capacity which need to be executed quickly.

10. BOXN wagons are becoming unloadable due to damages during loading/unloading. All railways should issue JPOs for imposing penalties for such damages. Sidings & tipplers should be checked periodically by Sr.DMEs and fences should be constructed to prevent JCBs from hitting the wagons.

11. A Committee of EDs of Railway Board had identified 9 locations for setting up facilities for repair of 'C' category wagons in 2007. So far these facilities have come up only in Adra, Bhillai and Hubli. These facilities should be set up quickly in Mughalsarai, Katni and Vishakapatnam.

12 The works sanctioned for wagon ROH in NWR (Phulera) and NER(Gonda) should be completed quickly.

13. Only Vijayawada (SCR) has converted all their BCNHL wagons to twin pipe . The other depots maintaining BOXNHL and BCNHL – MGS, NKJ and Bhillai for BOXNHL and Shambupura and Gandhidham for BCNHL should also convert all their rakes into twin pipe.

14. All wagon workshops should gear up to do POH of BOXNHL and BCNHL wagons, which will become due for POH from this year. During POH all single pipe BOXNHL/BCNHL wagons should be converted to twin pipe. For BCNHL wagons built prior to July 2010, door modification should be done with the sliding doors, where modification has not been done.

III. Address of AM(ME)

1. Even though freight stock is our bread and butter and contributes to maximum earnings, this is often neglected at management level. Field officers, who are our frontline managers, should make road maps for tackling all issues related to freight stock.

2. Not doing anything to prevent heavy damages which are taking place to wagons during loading and unloading is not acceptable. All field officers should shrug off their feeling of helplessness and effectively implement the action plan to prevent wagon damages.

3. Other important areas which require to be tackled on freight side are increasing wagon POH capacity, carrying out C category repairs in open line and gearing up for stainless steel wagon POH/repairs.

IV. Agenda items

Item No. 1 : **Issues related to couplers**

Proposed by : SER, SR, NWR, ECR

Problem definition :

1. Wear in imported knuckles of BOXNHL & BCNHL wagons leading to rejections in examination/ROH.
2. Non-compliance of warranty claims of CBC of BOXNHL and BCNHL wagons by wagon builders. In some cases wagon manufacturer had supplied the indigenous knuckle against the warranty claim.
3. Zonal railways have been fitting indigenous knuckles to 48-BD-08 to turn out the wagons.
4. Railways have asked for action to be taken for procurement of spares of imported couplers during POH of BOXNHL and BCNHL wagons
5. Failure of CBC body due to elongation of knuckle pin hole.

Deliberations :

SN	Action Points	Board's Decision
1.	Zonal railways may ensure that checking & rejection of coupler knuckles is done using the specified gauge with valid calibration. Further, traceability of rejected coupler knuckles vis a vis wagon details must be kept. The rejected knuckles must be available with the depot while the warranty claim is under process.	Approved
2.	Proforma for reporting warranty has been circulated to all zonal railways. The same may be used by all depots/workshops.	Approved
3.	Zonal Railways may approach contract placement authority [DRS (W)] for withholding of payment of the concerned wagon builder in case warranty claims are not addressed expeditiously.	Approved
4.	QA (Mech.) directorate of RDSO should hold periodical meetings with zonal railways and concerned vendors for sorting out warranty issues raised by Railways, especially for bogie items, coupler items and CTRB items.	Approved

Item No. 2 : **Issues related to BCNHL Wagons**

Proposed by : WR

Problem definition :

1. It is not possible to load 14th stack as per loading diagram. Loading parties are utilizing the space near the doors which damages the door.
2. There is no carline provided in the centre of the door resulted in cracking of roof sheet near weld joint in those manufactured in 2008 and 2009.
3. Field Performance of different Door Designs.

Deliberations :

SN	Action Points	Board's Decision
1.	BCNHL wagons owing to higher height and lower length require appropriate loading infrastructure to ensure loading up to 14 stack (cement bags). Necessary upgradation of loading infrastructure should be effected by users of BCNHL wagons.	RDSO to send a draft note for taking up this matter with Traffic Dte. Target date: 15.5.14
2.	Field failures of roof crack and sole bar crack have been addressed in new design of BCNHL wagons. Recommended repairs, advised by RDSO should be taken up by Zonal Railways in case where these defects are noticed.	Approved
3.	Significant reduction in sick marking on door account has been achieved in the modified single piece sliding door design of RDSO. Based on data of sick marking on door account and field feedback provided by SCR, WR, NR, CR, on performance of different door variants, it was recommended that 2 part sliding door be used in new BCNHL wagons. The feasibility of ensuring that BCNHL with 2 part sliding door are manufactured in the currently in-process wagon tender also needs to be examined.	Approved
4.	Wagon shops to carry out door modifications (where necessary) on BCNHL wagons coming for POH. Alongwith POH, twin pipe conversion should be carried out in single pipe BCNHL and BOXNHL wagons	Approved
5.	Sidings where BCNHL wagons are loaded/unloaded should be checked frequently to minimize damages.	Approved

Item No. 3 : **Issues concerning LSD and APM in Wagons**

Proposed by : ECoR, ECR, WR

Problem definition : Non-functioning of LSD in BOBRN Wagons,
standardization of LSD /APM

Deliberations :

SN	Action Points	Board's Decision
1.	The problems of LSD reported are mainly in the nature of LSD not being available on Wagons. Zonal Railways should ensure fitment of LSD on Wagons as per relevant RDSO Drawings	Approved
2.	Zonal Railways should set up maintenance facilities for overhaul and maintenance of LSDs in Workshops/ Depots.	Approved. Target date 30.9.14
3.	Standardization of APM shall be pursued appropriately by RDSO.	Approved

Item No. 4 : **Issues related to CTRB**

Proposed by : ECoR, WCR , CR , ECR, NWR, NER, SCR

Problem definition :

1. Marking of CTRBs Backing Ring for identification in Field
2. Detection of Hot Axles
3. Must change of Adapter in POH
4. Problems in joint inspections with OEMs in rejected CTRBs in Sick lines/ROH Depots.
5. Codal Life of CTRBs

Deliberations

SN	Action Points	Board's Decision
1.	Marking of CTRB Backing Ring for identification in field to be ensured by all workshops as per RDSO's letter no. MW.RB.Genl. dated 26/04/2012 as further clarified by Alteration 1 of RDSO's drawing no. WD-03034-S/1.	Approved
2.	RDSO to depute a team to Rayanapadu Workshop for clarification on the marking scheme	Approved. Target 30.6.14
3.	CWMs should audit the maintenance practices of Narrow Jaw adapters. They should also review the AACs.	Approved. Target 30.6.14
4.	Welding of adapter surfaces should not be done by workshops as it is not permitted as per G 95.	Approved
5.	CTR B Warranty joint inspection needs to be carried out at a location where the tenability and cause of rejection can be established. Since most sicklines and ROH depots do not have such facilities, the same should be done by workshops nominated for overhauling of CTRBs.	Approved
6.	It was suggested that a suitable permissible limit for difference in temperature between axles in empty condition should be specified. A study should be carried out by North Western Railway & RDSO jointly so that a view on the same can be taken.	Approved
7.	The Committee formed to review the concept of "codal life" for CTRBs should submit their report expeditiously.	Approved. Target 30.6.14
8.	Analysis of hot axles uploaded by RDSO on their Railnet website should be reviewed at HQ level every month. Action Plan for reducing Hot axles (available in Railway Board website at indianrailways.gov.in/Railway Board/Directorates/ Mech. Engg./circulars/Freight) should be implemented by all Railways to bring about a substantial reduction in Hot axles.	Approved
9.	System of Hot Box detection should be set up similar to that available in advanced Rail roads.	Approved.

Item No. 5 : **Rehabilitation of BOXN wagons with stainless steel panels to BOXNR**

Proposed by : WR

Problem definition : Rehabilitation of BOXN wagon

Deliberations :

SN	Action Points	Board's Decision
1.	RDSO has circulated a detailed report on rehab of BOXN wagons to all Zonal Railways (no. WDR/BOXNR/002/2013). Railways should send their comments on this Report within 15 days to RDSO. A committee comprising of CRSE/NWR (Convenor), CWM/JHS, CWM/RYPS and Director/Wagon/RDSO should examine the recommendations made in the RDSO's report as well as comments of Railways. They should also examine the Report on NPOH repairs made by CWM/RYPS. There will be a meeting in Railway Board in the month of June 2014 to finalise this issue.	Approved. Target 30.6.14

Item No. 6**Issues concerning BOBRN Wagons****Proposed by** : SR, ECoR, ECR, SER

Problem definition :

1. Workshops are not implementing modifications in Door Operating Mechanism (DOM), not replacing bushes, and patch welding door lips, which is leading to increase in unloading. Modifications in door mechanisms have not led to elimination of door defects.
2. Corrosion on Doors and hinges
3. Failure of door hinges on Bottom doors of BOBRN Wagons
4. Theft and damage of Bronze bushes of DOM

Deliberations :

SN	Action Points	Board's Decision
1.	Workshops shall ensure that modifications to latest RDSO Drawings and specifications of DOM are implemented with immediate effect.	Approved
2.	Defects to BOBRN Bottom discharge mechanisms are taking place due to damages during mechanized unloading for breaking/removing boulders trapped in between the Wagon and Wagon Doors. Zonal Railways shall take punitive measures against loading/unloading parties causing damages to Wagons at Track Hoppers	Approved
3.	Workshops should tackle BOBRN wagons on priority to liquidate the present accumulation.	Approved
4.	BOBRN wagons also undergo corrosion and damages and should undergo Mid-life Rehabilitation similar to BOXN wagons.	Railways should send proposals for inclusion under RSP.

- Item No. 7** : **Subsequent ROH of BOXNHL wagons**
- Proposed by** : ECR
- Problem definition** : The first ROH has been defined vide Railway Board letter No 2007M(N)/951/45 dated 25/06/2010 as 24 months. No instructions regarding periodicity of subsequent ROH of BOXNHL wagons are issued.
- Deliberations** :

SN	Action Points	Board's Decision
1.	RDSO has submitted a detailed report regarding periodicity of ROH/POH of BOXNHL/BCNHL wagons. The report has also been circulated to all Zonal Railways. The Railways who are doing ROH of BOXNHL/BCNHL (ECR, SCR, SECR, WR, WCR) should examine this Report in detail. There will be a meeting in Railway Board in May 2014 with CRSE/Freight of these Railways in Railway Board to decide upon ROH periodicity of BOXNHL/BCNHL wagons.	Approved

- Item No. 8** : **Issues related to bogies**
- Proposed by** : CR, SER, NR, WR, SR, ECR, SCR
- Problem definition** :
1. Standard replaceable liners at prominent wear surfaces of side frame and bolster have been provided in Casnub bogies but pedestal jaw (long & short) & anti rotation lug of side frame are not having.
 2. Normally warranty is valid for 24 months from date of commissioning. The cracks in bogie bolster and centre pivots are observed on minute examination of assembly during ROH which generally defers with the period of warranty examination dates. Therefore, the manufacturers generally do not own the warranty claim detected after that period.

3. Considerable nos. of BOXNHL wagons have been damaged on account of damage (cracks) in CP Top casting. Cracks are also being observed in the bolster of CASNUB bogies in BOXNHL wagons. Cases of loosening of in spring plank rivets have also been reported.
4. Maintenance issue in difficulty in fixing retainer to centre pivot pin on Casnub bogies observed.
5. It is noticed that during tipping operation, graphite flakes are likely to come out due to upside turning of wagons.
6. Standardization of Bolster Springs in all versions of CASNUB bogie
7. Springs worked out/deficient in Casnub bogies were noticed in the divisions during rolling in examination
8. Huck bolting of CP Top, CP Bottom, Side Bearer Housing

Deliberations :

SN	Action Points	Board's Decision
1.	The contours and surfaces of bogie interfaces are as cast to maximize bogie life. Attempt to provide liners at manufacturing stage will involve redesign of bogie side frame to accommodate liners with heavy precision machining work which, if not controlled effectively, can lead to serious field problems. As such, provision of liners at manufacturing stage is not required.	Approved
2.	Instructions of G 95 regarding provision of liners in various locations of bogie during POH to be strictly followed by workshops.	Approved
3.	QA (Mech.) directorate of RDSO should hold periodical meetings with zonal railways and concerned vendors for sorting out warranty issues raised by Railways, especially for bogie items, coupler items and CTRB items.	Approved
4.	In case IRS conditions of stores contract have to be amended for warranty periods, sufficient data to justify the same is required. Workshops and ROH depots to collect data of failures observed and submit their study to RDSO.	Approved. Target 30.9.14

SN	Action Points	Board's Decision
5.	Inspection of Bogie components including their fitment to be tightened to arrest failure of CP Top & Bolster and loosening of rivets of spring plank of BOXNHL wagons.	Approved
6.	Spring cotter (instead of existing split pin of the same size) may be tried during ROH at Mughalsarai during the fitment of CP retainer pin on a trial basis for 3 months and their performance monitored. RDSO to associate with the trial.	Approved
7.	The option for using non-metallic liners in lieu of graphite flakes should be examined at RDSO.	Approved
8.	Springs used on various types of bogies are not interchangeable due to design considerations. The issue of identification of each springs / groups is already addressed through color coding guidelines issued by RDSO. The same may be followed.	Approved
9.	Periodic checks of sidings and tippers should be done as per existing guidelines.	Approved
10.	RDSO should monitor field performance of lock bolts on newly built wagons.	Approved

Item No. 9 : **Failures of center pivot in BVZI Brake vans**

Proposed by : ECoR

Problem definition : The center pivot top in BVZI wagon is getting sheared off due to poor design.

Deliberations :

SN	Action Points	Board's Decision
1.	The C. P. Top design in BVZI wagons has been modified by RDSO in October 2011. Since then no failures have been reported. Zonal Railways should ensure that all older C. P. top bracket are modified to the new design during POH in workshops.	Approved
2.	The bolt securing arrangement in C. P. Top as per relevant RDSO drawings needs to be ensured by repair workshops during POH.	Approved

Item No. 10 : **Hogging of BVZI Wagons**

Proposed by : SCR

Problem definition : Many BVZI wagons are coming with hogged underframe up to 60-80mm at the center. This happens due to not being able to withstand the buckling forces during shunting and leads to deformation.

Deliberations :

SN	Action Points	Board's Decision
1.	Following audit of ASR and UBLs workshops, RDSO has forwarded a detailed report on manufacturing issues observed in manufacturing of BVZI underframes. These issues need to be addressed by these workshops so that correct manufacturing of BVZI underframes is ensured.	Approved
2.	Both Amritsar and Hubli workshops shall get their wagon manufacturing shops' QAP approved by RDSO within the next three months. Target August 2014.	Approved
3.	RDSO has sent to Zonal Railways a detailed dimensional Proforma to check and report any suspected hogging/distortion in underframes. Zonal Railways should send details as requested by RDSO.	Approved
4.	RDSO has designed BVCM wagons which are expected to address reported field issues and maintenance issues in BVZI wagons. RSP sanction to ASRW and UBLs, to enable BVCM manufacture, needs to be processed.	Approved

- Item No. 11** : **Welding failure of side stanchion in BOXNHL wagons**
- Proposed by** : ECR
- Problem definition** : Higher incidences of failures of welding of body side stanchion have been reported by ECR as compared to BOXN Wagons. ECR estimates that 43 % of wagons have such problems

Deliberations

SN	Action Points	Board's Decision
1.	Although the welding failure is primarily caused by poor workmanship during wagon manufacture, in order to eliminate welding, the Side stanchion design has been modified, by RDSO, for new BOXNHL wagons. The same should be implemented in all new BOXNHL wagons to be manufactured.	Approved
2.	RDSO has also circulated a repair procedure to address reported field failures in side stanchion of existing BOXNHL wagons. The same should be followed by Zonal Railways. Since BOXNHL/ BCNHL wagons are dimensionally optimized designs vis-à-vis SOD, ZR should refrain from carrying out unauthorized/ non-standard repairs on body side of these wagons.	Approved
3.	ZR should equip themselves with necessary facilities, consumables, raw material, components etc in sick lines/ ROH depots & workshops to undertake repairs in SS BOXNHL/ BCNHL wagons.	Approved

Item No. 12 : Examination of Privately owned wagons on other than nominated points

Proposed by : WR

Problem definition : Private container operators are requesting for basing their CC Rakes at points other than nominated points decided by Railway Board without providing maintenance facility. As per article 5 of model agreement, concessionaire has to provide the maintenance facility inside the terminal and bear a one-time capital cost for tool and plants. However there is continuous demand from traffic for examination of such rakes at various points not notified by Railway Board.

Deliberations :

SN	Action Points	Board's Decision
1.	Zonal Railways to implement Board's instructions vide letter no 2006/M(N)/951/1 dated 17-20/08/2007 in terms of facilities required for maintenance of Container Wagons.	Approved

V. Other points raised by Zonal Railways

SN	Item	Action by
1	CRSE/WR informed that a number of CC rakes were being received for examination in WR which had undergone damages in NWR.	CME/NWR
2	CRSE/WR mentioned about receipt of CC rakes with invalid BPC . All railways should monitor their CC rakes through FOIS and issue SMS regarding CC rakes where validity of BPC has expired.	All zonal railways
3	CRSE/WCR informed about CC rakes which were being received back for re-validation more than one time. BPC of CC rakes should be re-validated only once and the name of the base depot to which it is being sent should be clearly mentioned on the re-validated BPC.	All zonal railways
4	CRSE/NWR informed that they had made a standard diagram for the low fence which should be constructed for preventing JCBs from hitting the wagons.	All zonal railways
5	CRSE/NFR mentioned about missing fittings in BTPNs. This matter should be taken up with the oil companies.	DME/Fr.
6	CRSE/NCR mentioned about the issue of handling of road railers, in case of hot axles etc., which may require en-route detachment. RDSO to examine this issue in consultation with M/s KPC and issue suitable guidelines. M/s KPC should organize training to field staff at C&W training centres.	EDS(W)/RDSO All zonal railways
7	CRSE/CR informed about problems faced in the existing wagon master. This matter should be sorted out with C&IS Dte.	DME/Fr.
8	EDS(W)/RDSO requested for filling up of vacancies of 3 Directors in Wagon Dte. of RDSO.	EDME/PU
9	It was suggested during the meeting that there should be a system of capturing damages of wagons through some photographic method.	EDME/Dev.

Officers who attended WMG meeting at Ketti on 24th and 25th March, 2014

RAILWAY BOARD

SN	Name (S/Shri)	Designation
1	Alok Johri	MM
2	R Vatash	AM(ME)
3	Ashesh Agrawal	EDME(Freight)
4	Nitin Choudhary	EDME (Dev)
5	A Mittal	DME (Freight)
6	Vinod Kumar	DME(P) - I

RDSO

SN	Name (S/Shri)	Designation
1	Amitabh Sinha	EDS(Wagon)
2	SN Yadav	EDQA (Mech)
3	AR Tupe	ED,CAMTECH
4	Anirudh Kumar	Director (Wagon)
5	Vishal Kapoor	Director (Wagon)
6	Rupesh Kohli	Director (Wagon)

RAILWAYS

SN	Name (S/Shri)	Designation
1	R Kuppan	CME/SR
2	P A Lamghare	CRSE/CR
3	Anil Sharma	CRSE/ER
4	Chetram	CRSE/ECR
5	R Behl	CRSE/WR
6	Shuhbranshu	DRM/Salem
7	S Bajpai	DRM/TVC
8	T Venkatasubramanian	CRSE(Chg.).SR
9	Arun Arora	CRSE/NR
10	B K Paswan	CWM/JUDW
11	S P Singh	CRSE/ECOR
12	B M Agrawal	CRSE/NCR
13	Shivendra Mohan	CWM/JHSW
14	P K Mishra	CRSE/NFR
15	K S Chandra	CRSE/NWR
16	S M Sharma	CRSE/SWR
17	Gautam Dutta	CRSE/SR
18	Praveen Tiwari	CRSE/WCR
19	M Amarendra	CRSE/SC
20	R V N Sharma	CWM/RYPs

SN	Name (S/Shri)	Designation
21	Y B Sahare	CWM/KGP
22	Prasada Ravikumar	CWM/Raipur
23	S C Behera	Dy.CME/SER
24	S K Senapati	Dy.CME/SECR
25	R.Sabhpathy	Dy.CME/W/CW
26	N.K. Mishra	Dy.CME/Kota