MINUTES
OF
FIFTH WMG MEETING

MUMBAI
& 15th SEPTEMBER,2004

DESIGN & STANDARDS ORGANISATION
LUCKNOW

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Inaugural Address

Shri Suneet Sharma CRSE, Western Railway welcomed Shri Z.A. Ansari, General Manager, Western Railway, other distinguished guests and delegates. He emphasized upon the importance of Wagon Maintenance and its contribution in overall performance of Indian Railways.

Shri Ansari, General Manger, Western Railway in his inaugural address said :

"There is lack of knowledge about wagons among Sr. Supervisors and officers. Ignorance of maintenance instructions of door-operating mechanism of BOBRN wagon on SE Railway is an example. This is due to lack of will and sincerity to acquire knowledge by going through available literature on the subject.

These issues need a change of attitude at higher levels. Common feeling is wagon is a wagon, fill it up and pull it to destination. It cannot continue to be so if reliability has to improve.

There are serious problems in field about maintenance facilities leading to practice of short cuts. We are satisfied if wagons do not derail. That, a wagon should not derail is the bottom line but that is not the end of it.

Similarly there is ignorance about rail wheel dynamics. The impacts on rail ing due to a small out of round wheel is more than a 50mm flat on the wheel. oorkee has come up with a proposal for having a course organized for civil mechanical officers where officers need to be educated.

orum of Wagon Maintenance Group should discuss these issues."

ess by AM(ME):

Biswas, AM(ME) Railway Board in his key not address said :

th in economy of the nation and emphasis being given to infrastructure Government demands growth in transport output.

need not be complacent with our past achievements of ever tonnage loaded. CHINA is loading almost four times with similar . Therefore, a quantum jump is expected from us.

open line are doing well but traffic department wants more flexibility on, considering wagon as a free moving unit. They want increase in ned kilometers by End-to-End examination rakes. This house could issues.

ROH depots are in bad condition in general and so are the train examination points. Board has allowed for higher kilometer earning per examination for such stocks which are attended by A grade examination points and ROH depots. This concept has been well received by the Railways.

CC rakes are getting lost and Railways are remaking them. Wagon and rake integrity is key component to this system of operation. It is important that rake and circuit integrity is maintained. A consensus on determining as to how to keep a watch on these rakes needs to be evolved.

The reliability parameters of wagons like wagon detachments, sick marking are improving but we have to do even better for meeting our corporate safety plan targets laid for the year 2013.We should try to get ISO 9000 certification for train examination points as well like ROH depots.

Quality should be built in by workshops during POH. It should be sustainable and visible in 90 days detachment figures. Input of materials in workshops is an area of concern and shortage of new components increases the propensity to take shortcuts by staff.

Improvements& modifications by RDSO are taking a long time to implement in the field. Trial wagons are getting lost. A wagon tracking mechanism should be evolved by RDSO to control this. RDSO should also work out economics of modifications and a time bound program for implementation on Railways.

For brake power operation of freight trains is another area of concern. Use of electronic smart card with the driver for keeping track of validity of brake power certificate needs to be explored."

Key Note Address by MM :

Shri P.N. Garg, Member Mechanical in his address said:

Today, there is lot of focus on wagons, since loading is going up and targets are being revised upwards. Requirement of the wagons has gone up, however production of new wagons is not matching. During 2004-05 IR will need 20000 new wagons but production is not likely to match. Therefore, challenge is to make more wagons available for traffic by innovative and better maintenance in total own time. We have to improve reliability of wagons through better maintenance practices and better design. For all these, WMG is the right forum RDSO has to play a vital role in it.

Now the depots have been categorized as A, B, C, D depending on infrastructure facilities available in them and rakes based at A Grades Depots have BPC for 6000 Kms. while for other depots, validity is for 4500 kms only.

A concept of Nodal train examination points spread all over the country has been floated by Traffic Directorate where CC rakes will get examined, making it similar to End to End running. This concept negates the rake ownership principle which is the basic foundation of the entire system and therefore not acceptable.

It is learnt that large no. of freight trains are still being run on invalid BPCs. There is urgent need to monitor these by divisional TXR controls.

Two new types of wagon, BOST & BFNS have been inducted into service. All Railways must have necessary documents required for their loading and operation.

Use of composite materials in freight stock has to be explored by RDSO so as to make more reliable wagon components.

In the Railway budget, use of aluminum and stainless steel in wagon building has been announced. This will improve pay to tare ratio within the constraints of axle load, track loading density & schedule of dimension.

Due to shortage of wheel discs being faced by IR during this year, about 1500 wagons could be stabled by Dec. '04. Efforts should be made to stable only unloadable wagons of which BOXN could be the maximum.

Lot of discrepancies are found between census figures of wagon and the wagon register. Wagons, as old as 100 years keep figuring in the statistics. There is an urgent need to reconcile the figures with the master. Any wagon not figuring in consecutive census should be deleted."

...oss by Sr. ED/Wagon RDSO

...M. Dutta, Sr ED/Wagon mentioned about lack of knowledge of tools, ... and gauges used by artisan staff for wagon maintenance in depots & ...ps. There is an urgent need to educate supervisors and artisans for ... absorption of technologies and maintenance instructions.

...heel impact load detector is increasing on foreign Railways. One ...ly developed such equipment has been commissioned at Ajgain in ...anpur section. A small out of round in a portion of wheel ...ce can cause impact loads higher than that caused by wheel flats of

...d to improve reliabiiity of side bearer pads for NLB bogies which is ...t RDSO.

...ve better traceability of trial wagons, it has been decided that in ...ll be generally conducted on BTPN or BOBRN rakes, which ...ed circuits, for a longer duration.

FOLLOW UP ITEMS OF 4TH WMG :

Item No.	Group's Recommendation	Bd.'s Decision
1.6	**Modification to BOXN for corrosion reduction** Side stanchions of BOXN wagons should be made similar to those of BOX wagons for new manufacture. Drg. No. WD-8007-S-17 Alt. 9 issued. However, the cross section of the stanchion has not been made similar due to manufacturing constraints.	Design of BOXNHS wagons to be revalidated to sustain overload of 6t. beyond CC to take care of permitted overload of 4t and loading tolerance of 2t.
1.8	Door locking bracket of flat type should be replaced by 100x60 mm channel during POH Drg. No. WD-90007-S-1 Alt. 10 issued.	Closed
1.2	**POH kits and grease standardization for DV overhaul** The supply position of grease has since improved.	To be monitored by RDSO
	Wax coating and phosphating of DVs Liluah Workshop is carrying out phosphating and waxing of distributor valves during POH. RDSO to carry out quality audit of Liluah Workshop and confirm the effectiveness of the process. Field performance of DVs in service where freight and coaching stock DVs attended BY LLH be assessed by RDSO and report sent to Board. Efforts also held on exploring the possibility of using SS pipes for air brake system on freight stock as SS pipes are being used on coaching stock. Board mentioned that although decision to switch over to steel pipes on coaching stock was taken quite some time complete switch over has not been possible as sources for supply of these pipes and pipe fittings not established to meet the full requirement. RDSO to study use of seamless pipes for air brake pipes which has been implemented by Wagon Manufacturers. However, stainless steel pipes would be costlier and efforts to develop adequate sources. RDSO suggested to use SS pipes on branch pipe to reduce the Recommendation: Group recommends to carry out in the Workshops. Necessary drawing will be issued by RDSO.	Recommendation approved . To be monitored by RDSO

Item No.	Group's Recommendation	Bd.'s decision
4	**Strengthening of brake beam pocket on side frame in NLB bogies** This item has been further deliberated at Item No. viii of WMG-V.	To be dealt with WMG 5 items
5.	**Provision of Adapter** Drg No.WD-85053-S-1 Alt. 4 and WD-88039-S-1 Alt.2 revised & letter issued	Closed
6.	**Provision of wear liner between top and bottom center pivots:** This item has been further deliberated at Agenda No. 9 of WMG-V.	To be dealt with WMG 5 items
	Checking of square ness of CASNUB bogie Guidelines have been issued vide letter No MW/WMG dt. 113/14-5-03.....	Closed
	Permissible limit of bending of brake beams CAMTECH report accepted by Railway Board and circulated to Zonal Railways for implementation vide letter No. (S.No. 42). 2001/M(N)/951/15 dt.4.2004.	Closed
	Leakage of oil from Bottom Discharge Valve Sources of grease for BTPN Case Specifications and sources identification been done and Railways advised vide No. MW/WT/IMP dt. 13.9.2002.....	Closed
	Sealing arrangement on BFR,BRH & BRN Required drawings have been issued by However, Group recommended providing door arrangement only on those wagons valves have already been cut.	Closed

Item No.	Group's Recommendation	Bd.'s decision
15.1	**Modifications on the foot board of BVG & BVZC brake vans:** Drg No. WD-81035-S-19 Alt. 3 issued to Rlys.	Closed
17.	**Prescribing wear limit of Seal Wear Ring bore in CTRB:** Instruction issued to the Rlys.	Closed
0	**Periodicity for cleaning of Dirt Collector:** Specifications have been revised and issued vide letter No.MW/APB/Specification dt. 27.6.03.	Closed
	Stamping of POH Return date on Axle End Cap of CTRB at the time of overhaul: Instruction issued vide letter No MW/RB/BOXN dt. 11/16.6.93.	Closed

5th WMG AGENDA ITEMS

AGENDA No.1 : EXCESSIVE FAILURE OF SIDE BEARER PADS

PROPOSED BY: N.W. RLY

DISCUSSIONS:

Metal bonded side bearer rubber pads of revised specification WD-03-Misc-86 (Rev.3) [implemented from 01.07.2002] are also failing. Average life obtained before failure ranges between six months to twenty months. The failures of side bearer pads are on all wagons and side bearer pads supplied by all manufacturers are failing.

Use of Injection molding process in place of existing transfer molding process was proposed by RDSO as a remedial measure.

Group's Recommendation	Railway Board's decision
(1) Molding process of Side Bearer Pads should be changed to Injection molding in view of good results obtained from Injection Molded Elastomeric Pads	Approved. Performance of proposed Injection moulded side bearer pads to be monitored by RDSO.
(2) RDSO should improve upon the existing design of metal bonded side bearer pads after thorough review of service conditions and the improved specification should be issued by December 2004.	Modified Design / Specification to be finalized and issued by Dec.,2004.

AGENDA No.2: REPLACEMENT OF SQUARE HEAD BOLTS WITH COTTER & PIN IN BOGIE SIDE FRAME

PROPOSED BY: SOUTHERN RLY

DISCUSSIONS: Whenever wheel sets are dismantled from bogie, square bolts are cut by gas cutting, as these are either tack welded or corroded. Hence use of square bolt is limited to 18 months i.e. ROH period. Replacement of square with pin and cotter arrangement may be considered.

Use of square head bolt with pin and cotter is not safe as during lifting it is possible that wheel may drop. Side frame key is essential for proper fitment of wheel set in bogie, else during derailment, the wheel set can come out resulting in extensive damage.

Group's Recommendation	Railway Board's decision
Existing arrangement should continue. Unlock nut can be made optional in lieu of existing nut.	Approved.

AGENDA No.3 MODIFICATION OF BRAKE BEAM SAFETY BRACKET IN CASNUB BOGIE

PROPOSED BY: SOUTHERN RLY & WESTERN RAILWAY

DISCUSSIONS: Modification of brake beam safety bracket in CASNUB bogie is required, as wagons are marked sick for defects such as bent, broken and missing brackets.

Southern Railway Suggested modification by providing two-stopper plates on either side of brake beam safety bracket (by welding). Western Railway reported problem of loose rivets of brake beam safety bracket

Southeastern Railway suggested removal of brake beam safety bracket from Casnub bogies having sliding type brake beam to drawing number WD-89033-S-1. Brake beam safety bracket is essential for hanger type brake beam to drawing number WD-85084-S-1 fitted in Casnub 22 W (M) bogies.

RDSO suggested modification in existing brake beam safety bracket securing arrangement. Use of five rivets in place of three rivets and a packing plate welded to the brake beam safety bracket was suggested.

Group's Recommendation	Railway Board's decision
In view of service experience it is considered that Brake beam safety bracket to drawing number WD-87078-S-1 is not essential for Casnub bogies having sliding type of brake beams, and need not be replaced if found damaged or missing.	Approved.
Brake beam safety bracket having modifications proposed by RDSO is essential for Casnub 22 W (M) bogies having hanger type brake beam to drawing number WD-85084-S-1.	To avoid confusion at field level revised comprehensive instructions to be issued covering all type of bogies in use.

Beam safety bracket to drawing number WD-87078-S-1 was Casnub bogies as per Rly.Bd's letter No. 88/M (N) /951/10 August 27,1999 based on discussion in 2nd WMG meeting held in

AGENDA No.4: WEAR PROBLEM IN CENTRE PIVOT (BOTTOM)

PROPOSED BY: EASTERN RLY

DISCUSSIONS:

Bottom center pivot for NL and mark II CASNUB bogie gets longitudinally worn in the direction of traction and braking. Reclamation is done by building up by welding, which is inadequate to achieve required surface finish. Suitable arrangement for achieving surface finish etc. to be advised.

It is difficult to obtain required surface finish by welding process. Welding of Centre Pivot (bottom) should be stopped. Worn centre pivot (bottom) should be replaced with a new centre pivot (bottom).

Group's Recommendation	Railway Board's decision
Reclamation of center pivot bottom should be discontinued as soon as possible and during POH of Casnub bogies, centre pivot assembly must be replaced with a new centre pivot (top & bottom). Released centre pivot (top & bottom) may be used by sick lines depending on condition.	Approved. Zonal Railway should accordingly revise its requirement of Centre Pivots (Top & Bottom).

AGENDA No.5: FAILURE OF CP TOP IN 22 WM BOGIES:

PROPOSED BY: WESTERN RAILWAY

DISCUSSIONS: CP (top) fail due to cracks initiating from the surface parallel to wagon. This is due to the fact that all tractive and braking forces are surface of CP (top). CP top seems to be weaker in section for these Railway suggested fitting CP (top) with its longer axis parallel to axis of wagon body so that a larger cross section is bearing the braking forces reducing the risk of damage to the CP top.

fitment of CP (top) to the center sill with its longer axis along gon is not feasible. Pitch of the rivets is 235 mm while the center mm apart.

Group's Recommendation	Railway Board's decision
(1) RDSO to study the suggestion of Western Railway and reasons for cracks in Centre Pivot (top) to be ascertained and design reviewed.	Study to be completed by 15.01.2005.
(2) Centre Pivot (top & bottom) to be compulsorily changed during POH of Casnub bogies in Workshops w.e.f. July 2005. Released serviceable centre pivots may be used by sick lines depending upon the condition. Use of Graphite flakes for lubrication should be ensured by Railways. Huck bolting of CP top to be implemented.	Approved. Zonal Railways should revise the requirements of spares and other material. Necessary Tools should be arranged for Huck Bolting of CP Top.

AGENDA No.6: LOOSENING OF ANGLE TYPE BRACKET BEAM SAFETY SUPPORT

POSED BY: SOUTHERN RLY. & WESTERN RAILWAY

SSIONS: Modification of brake beam safety bracket in CASNUB bogie is as wagons are marked sick for defects such as bent, broken and rackets.

Railway Suggested modification by providing two-stopper plates on e of brake beam safety bracket (by welding). Western Railway reported loose rivets of brake beam safety bracket

m Railway suggested removal of brake beam safety bracket from es having sliding type brake beam to drawing number WD-89033-S- m safety bracket is essential for hanger type brake beam to drawing 5084-S-1 fitted in Casnub 22 W (M) bodies.

ted modification in existing brake beam safety bracket securing Use of five rivets in place of three rivets and a packing plate rake beam safety bracket was suggested.

Group's Recommendation	Railway Board's decision
(1) In view of service experience it is considered that Brake beam safety bracket to drawing number WD-87078-S-1 is not essential for Casnub bogies having sliding type of brake beams, and need not be replaced if found damaged or missing.	Approved.
(2) Brake beam safety bracket having modifications proposed by RDSO is essential for Casnub 22 W (M) bogies having hanger type brake beam to drawing number WD-85084-S-1.	To avoid confusion at field level revised comprehensive instructions to be issued covering all type of bogies in use.

NOTE: Brake beam safety bracket to drawing number WD-87078-S-1 was provided on all Casnub bogies as per Rly. Bd's letter No. 88/M (N) /951/10 Pt.(II) dated August 27,1999 based on discussion in 2nd WMG meeting held in January, 1999.

ITEM No. 7: BOLSTER SPRING DISPLACEMENT DURING TIPPLER OPERATION

RAISED BY: E.C RLY

OBSERVATIONS:

During operation bolster springs of BOXN wagon gets displaced /work out of attachment of wagons. East Coast Railway stated that average rate of displacing is four per rake during tippling operation and suggested for provision of stopper on bolster top at the edges, similar to ICF bogie.

As per instructions issued by Railway Board, post-tippler examination of wagons is necessary. Once in six months joint certification of tippler by Sr.DME and representative of the siding owner is also required as per letter No. 98/M (G)/27.11.2002.

Group's Recommendation	Railway Board's decision
(1) Instructions issued vide Railway Board's letter dated 27.11.2002 must be followed by zonal railways.	Approved.
(2)Divisions must conduct post-tippler examination of rakes.	Zonal Railways to implement and confirm compliance to Board.

AGENDA No.8: PERFORMANCE OF NON-METALLIC LINERS ON NLB BOGIE:

PROPOSED By: RDSO

DISCUSSION:

In the 4th WMG meeting, RDSO was advised to develop and undertake service trials of non-metallic brake beam pocket liner to replace the existing Silicon Manganese liner. One Hyderabad based firm, M/s. Poly Hi Solidur has developed the liner made of UHMWPE (Ultra High Molecular Weight Poly - Ethylene). Two Nos. of these liners were fitted in one of the BOXNHS (BMBS) wagons (No. SE-175182) in December 2002. Wear on these non-metallic liners was negligible up to July 2004.

Sixteen (16) numbers of these non-metallic liners were fitted on two BOXNCR wagons based at VSKP (East-Coast Railway) in March 2004. Up to June 2004, kilometers earned by these wagons were 15,000 and three liners were found missing on one of the two wagons.

Trials are required to be conducted on a complete rake to evaluate field performance. Trials on two rakes based at MGS and VSKP are to be conducted. Suitable arrangement of these non-metallic liners with the bogie side frame is to be provided to prevent cases of missing liners.

Group's Recommendation	Railway Board's decision
Central and East-Coast Railway to conduct trials on two rakes each based at MGS & VSKP to monitor field performance	Approved. Trials to commence latest by March,2005.
RDSO to finalise design and approve source of non-metallic liners based on successful field trials over a period of six	RDSO to finalize design and Approve source etc. by Sept.,2005.

AGENDA No 9: PERFORMANCE OF WEAR LINER BETWEEN TOP AND BOTTOM CENTER PIVOT

PROPOSED By: RDSO

DISCUSSION: Service trials of Non-metallic Centre Pivot liner made of UHMWEP developed and supplied by M/s. Ploy Hi Solidur Plastic India Ltd. Of Hyderabad were conducted on 4 Nos. of wagons based at VSKP.One wagon was detached from the close circuit rake resulting in monitoring of three wagons. On the basis of the performance of six non-metallic centre pivot liners, 50% of the liners showed deformation due to plastic flow etc. the remaining three liners showed no deformation and wear after seven months of running (Km earned -- 46000).

Extensive service trials by fitment in one full rake are recommended for further study since no damage to the top or the bottom pivots has been observed at the end of this trial. Trials on six more wagons (BOBRN) based at VSKP are proposed with non-metallic centre pivot liners. These liners will be fitted during manufacturing of the wagons so that new centre pivot assembly is used during [illegible].

[illegible] on complete rake of wagons fitted with these non-metallic liners are [illegible]d to evaluate the performance of these liners.

[illegible]roup's Recommendation	Railway Board's decision
[illegible] on six BOBRN wagons based [illegible] to be conducted for evaluating [illegible]rmance of non-metallic centre	Approved. Trials to commence latest by Match,2005.
[illegible] OBRN wagons based at [illegible] Coast Railway to be fitted [illegible]allic centre pivot liners and [illegible]nd bottom) for conducting	Approved. Trials to commence latest by March,2005.
[illegible] finalise design and [illegible]s for non-metallic centre [illegible]ased on performance	Revised drawing to be issued by RDSO by 15.01.2005.

AGENDA No.10 : PROVISION OF SPLIT COTTER IN KNUCKLE PIN

PROPOSED: W. RAILWAY.

DISCUSSION: Presently only in less than half of the cases knuckle pin is secured by proper welding as per RDSO Drawing No. SK 627574. If present instructions of securing the knuckle pin with washer at bottom is ensured, there will not be any problem of knuckle pin falling during tippler operation. The alternative proposal of RDSO by extending the pin length and providing additional washer and split pin was not recommended. Some railways confirmed that they are following RDSO instructions and have no such problems.

	Group recommendation	Boards Decision
i)	The existing arrangement of securing knuckle pin by welding of washer at bottom of the pin is adequate.	Approved.
ii)	Railways must ensure that welding is done as per RDSO Drawing No. SK 627574.	Approved.
iii)	A revised drawing with provision of APD strap on top be adopted.	Revised drawing to be issued by RDSO by 15.01.2005.

No. 11 : LIFTING OF CBC AND HITTING ON BARREL OF BTPN TANK WAGON.

S. RAILWAY

The possibility of CBC draft gear assembly getting lifted from its and dashing against barrel increases with wear of coupler coupler shank wear plate. Another reason for causing such type adequate attention to draft gear. Railway Board desired that all ove the maintenance of coupler and draft gear to avoid such roposal to provide additional plate was considered necessary on er manufacture and during POH.

Group recommendation		Boards Decision
i)	All railways to improve the maintenance of coupler and draft gear to avoid such defects.	Approved. Zonal Railways should be advised accordingly by 15.01.2005.
ii)	RDSO proposal to provide additional plate to be finalized for new wagons under manufacture and during POH.	Approved. The matter should be finalized by 15.01.2005.
iii)	The modification is to be finalized by RDSO in consultation with some workshop to confirm the practicability of modification in workshops.	Revised drawing to be issued by RDSO by 15.01.2005.

NDA No. 12 : MODIFICATION IN DESIGN OF FOOTSTEP AND LADDER PIPES OF BOXN WAGON :

OSED: N.C.RAILWAY .

AND LONG FOOT STEP:

SION : Current design of short footstep has the disadvantage of welding for fixing it with headstock. Further, footstep beneath dle (long foot step) is also required to be welded to the sole bar. ations of welding are very difficult to carryout and adequate annot be ensured unless down hand welding is done on s. Feasibility of not having hand wheels itself and also whether ep can be made in line with corner angle and end stanchion ed. But this will increase the span and weight of short foot

Groups recommendation	Boards Decision
i) Short foot step: RDSO's proposed drawing with twisted flat lap welded on to vertical face of head stock is acceptable.	Approved.
ii) Long Foot Step: RDSO's proposed drawing with twisted flat lap welded on to vertical face of sole bar is acceptable. The length of twisted portion should be kept minimum so that the footsteps do not become weak in bending .	Revised drawing to be issued by RDSO by 15.01.2005

12.2 **AGENDA No.12 : LADDER PIPE PROVIDED AT THE END OF THE WAGON:**

DISCUSSION : At the time of replacing ladder pipe, welding is required to be done all around the periphery , causing a weak joint resulting in large deficiency of ladder pipes.

The Group discussed for solid round instead of hollow pipe for better fastening of ends and lap welding on to end stanchion and corner angle. A separate ladder like the one provided in BTPN Wagon was suggested.

Groups recommendation	Boards Decision
Separated ladder to be fixed on end of BOXN Wagon in same way as provided in BTPN wagon.	Approved. Revised drawing to be issued by RDSO by 15.01.2005.

AGENDA No. 13: ELIMINATION OF INSIDE CARLINE ANGLES ON COVERED WAGONS

PROPOSED: S.C.RLY.

DISCUSSION : On newly manufactured BCNA wagons, inside carline angles have been eliminated. However, there are no such instructions for older BCN wagons. It is suggested that inside carlines on older BCN wagons also be eliminated since new wagons without inside carline angles are not showing any problem

Groups recommendation	Boards Decision
Inside car lines on old BCN Wagons to be removed as and when roof is taken up for repair/ replacement.	Approved.

AGENDA No. 14 : PAINTING OF WAGONS DURING POH / BY KOTA WORKSHOP:

PROPOSED: W.C. RLY.

DISCUSSION: During POH, wagons are painted but it is not possible to get bare metal surface on which primer paint can be applied. WC Rly proposed that wagons where the original paint is intact procedure of scrapping out loose scales and paint followed with one finishing coat can be adopted safely without compromising the importance of having rust prevention coating on the surface. RDSO suggested for power tool cleaning of the surface and painting with coating.

Groups recommendation	Boards decision
Surface preparation as recommended by RDSO to be followed. Two coat paints take considerably longer period. Hence two coat system comprising of one primer and one finished coat to be adapted result to be seen. RDSO must look into the corrosion problem of the inner side of the wagon. It is observed that corrosion starts from the inner side and spreads towards outer side of the wagon. Measures are also to be suggested by RDSO to resist corrosions of the above parts.	Approved. RDSO to issue comprehensive instructions regarding Recommendation (iii) & (iv). RDSO should completed study and submit report with suggestions by 15.01.2005.

AGENDA No. 15: MODIFICATION OF MANHOLE COVER OF TANK WAGON.

PROPPOSED: C. RLY

DISCUSSION: C.Rly has proposed modification to manhole covers of tank wagon on account of covers being left open at unloading points, which may touch OHE wiring. Such incidences are occurring in DC traction area only where the clearance from OHE is iess. They have suggested sliding type cover. However. Western Railway have maximum BTPN operation but have not face any such problem.

The dome cover is provided with a gasket. Sliding or swiveling design of dome cover is likely to damage the gasket affecting the sealing.

Groups recommendation	Boards Decision
RDSO's proposed drawing of relocating the lifting handle of dome cover is not acceptable. Provision of rubber block for cushioning the fall of dome cover is acceptable. RDSO to issue suitable drawing for new manufacture and POH wagons.	Approved Revised drawings for new manufacturer should be issued by 15.01.2005

AGENDA NO.16: WARRANTY CLAIMS ON BOUGHT OUT ITEMS OF WAGONS

PROPOSED: RDSO

DISCUSSION:

At present, system of warranty claims by maintenance depots/workshops is functioning satisfactorily. This lack of data is staked as a claim of good service by suppliers, which may not be true.

All products, which are RDSO inspected items should have month, year of warranty embossed on the product in addition to details of manufacturer. Workshop and Depots should be able to directly complain to manufacturer for warranty replacements, with a copy to RDSO and Railway Board for records.

Groups recommendation	Boards Decision
RDSO proposal of embossing warranty expiry date on products is accepted. RDSO should prepare a warranty claim format for use in field.	Approved. Comprehensive guidelines to lodge warranty claim including checklist and format to be issued by 15.01.2005.

AGENDA NO.17: APPLICATION OF HUCK BOLTS IN FIXING CENTRE PIVOT

PROPOSED: RDSO

DISCUSSION:

In Workshops, for replacing of centre pivot, riveting has to be done overhead which is a tedious method and therefore, prone to poor workmanship. Similarly, load bearing rivets between draft gears and housing also are difficult to work.

It is proposed to use Huck Bolts in place of rivets for the above two heavy load applications. For CP top application drawings has been amended for Huck bolting from 2005-2006. This would require a clear space for tool application only one side, which is available. Further, Huckbolts are stronger in design less prone to poor workmanship, being a mechanized process.

Groups recommendation	Boards Decision
proposal is acceptable. RDSO literature on collar cutter for of huckbolts.	Approved. RDSO to issue comprehensive guidelines by 15.01.2005.

o.18: DOOR HINGE BREAKAGE ON BOBRN WAGON

E.C. RAILWAY

Large number of BOBRN wagons are marked sick due to or hinge including new wagons.

ggested to provide stiffener on hinge due to which both arms ral piece and able to withstand higher force.

Groups recommendation	Boards Decision
Group recommends adopting forged door hinge design proposed by RDSO for repair as well as new manufacture of wagons.	Approved. Zonal Railways should be advised accordingly by 15.01.2005

AGENDA No. 19: FOUR WAY CAST IRON VALVE FOR DOM ON BOBRN WAGON

PROPOSED: RDSO, ITEM 18 OF WMG 4 :

DISCUSSION : As per decision taken during the last WMG meeting 4-way valve was to be procured by S.E. Railway and put on trial on some of the rakes. It was also decided that South Eastern Railway after trial would send a detail report to RDSO for taking the final decision. The trial report of South Eastern Railway has not yet been received.

Groups recommendation	Boards Decision
Railways should provide air pipe oling arrangement for connection air pipe line of loading and ading stations	Approved. Zonal railways should be advised accordingly by 15.01.2005.

No. S 1.1 : FAILURE OF SIDE STANCHIONS OF BOXN WAGONS:

D BY: SEC Railway, Raipur

BOXN wagons are being manufactured with welded pillars in sing is welded with the bottom plate. During POH, it has been these pillars are failing from the weld and no. of pillars are required during the first POH itself.

uggested that fitment of this type of welded pillars be changed to ction and then welding with the bottom plate. This arrangement ght of vertical arms of U pressing. An alternative to relocate chions as presented by RDSO and discussed.

Groups recommendation	Boards Decision
RDSO will validate the FE Analysis results with the proposed stiffener arrangement in stanchion. The drawings can be issued thereafter.	Approved. RDSO to validate FE analysis results and issue necessary drawings by 15.03.2004.

AGENDA No. S 1.2 : REPLACING AIR BRAKE COMPONENTS WITH LIGHT WEIGHT FIBRE COMPONENTS

PROPOSED BY: N.C.RAILWAY/ALD.

DISCUSSION:

to heavy weight of air brake components, they tend to break due to handling during POH. It is suggested that brake components i.e. AR and Cylinder of BOXN/BCN etc. wagons should also be made out of fiber to weight. RDSO does not recommend, due to possibility of hitting by or cattle run over is likely to puncture FRP shells

Groups recommendation	Boards Decision
cylinders and Air Reservoirs are recommended for application on ns generally.	Approved.

No. S.1.3 : MODIFICATION IN FOOT STEP BRACKET FOR BVG/BVGT BRAKE

D BY: EASTERN RAILWAY

suggested simplified version of BVZC brake van footstep which is y be used and standardized on all type of Brake Vans.

acceptable to RDSO, but existing brake van footsteps will be material will be required for fabrication of footstep.

ps recommendation	Boards Decision
of BVG/BVGT should be line with BVZC design. The be issued by RDSO.	Approved. RDSO to issue necessary drawings by 15.01.20005.

AGENDA No.S.1.4 : IDENTIFICATION PROBLEM IN BRAKE BEAM OF BLC WAGONS

PROPOSED By: NORTHERN RAILWAY

DISCUSSION: Brake beam of BLC wagons (CONCOR) has minor difference from brake beam of Casnub bogies. Northern Railways requested RDSO to provide identification marks on these brake beams of BLC wagons. This will enable field staff to easily differentiate these brake beams from conventional brake beams of Casnub bogies.

The group studied modified drawing of brake beam of BLC wagons having following features:

- Colour of Paint: Black (Conventional brake beam: Red)
- Four identification pieces (35mm x 5mm) to be welded on the tensile member of brake beam for BLC wagons (during manufacturing)

Group's Recommendation	Railway Board's decision
brake beams of BLC wagons to be by Northern Railways during of BLC wagons.	Approved. NR should be advised accordingly by 15.01.2005.
ed drawing of brake beam to be ed during procurement of new LCCF CONCOR	Approved. RDSO should advise CONCOR accordingly.

S.2.1: MODIFICATION IN WARRANTY PERIOD OF EM PADS & SB PADS

: RDSO

South-Central Railway suggested modification in existing of elastomeric pads and side bearer pads. The warranty of and side bearer pads should be from month/year of place of existing clause of date of supply. Very often the wagon rranty claim is different from the depot, which has fitted r side bearer pads. Hence date of supply is difficult to know nty claim.

RDSO proposed modification in warranty clause so that warranty is raised on the basis of month and year of manufacturing. Uniform warranty period of 30 (thirty) months from month and year of manufacturing was proposed for elastomeric pads and side bearer pads.

Group's Recommendation	Railway Board's decision
The warranty period of elastomeric pads (WD-20-MISC-95) and side bearer pads (WD-03-MISC-86) should be changed to thirty months from month and year of manufacturing.	Approved. RDSO should revise specifications/drawings and advise zonal railways by 15.12.2004.

DESIGN ISSUES RAISED BY RAILWAYS

CRSE/CR requested for study of design of metal bonded side bearer rubber pads to minimize failures. This study should include actual load experienced by side bearers in service.

RSE/ECR raised the problem of BOXNHS wagons fitted with Bogie ounted Brake system (BMBS). Due to non-availability of spare parts high ercentage of BOXNHS wagons (BMBS) are ineffective. He requested for rvention of RDSO so that M/s. ESCORTS Limited, Faridabad attends to se wagons. Sr. ED/ Wagon RDSO desired that wagons with BMBS ich have been misplaced from their base depots should be sent back to base depots by other Railways, otherwise it will not be possible to tain them.

E/SR requested RDSO to furnish the minimum wall thickness and for Knuckles

YPS, SCR mentioned that 30% of the wagons being received for deficient of Hand Brake Wheel. RDSO to study and advise APD re use of FRP wheels.

Raipur (W) mentioned about absence of coil springs from the DV nd no means of their testing.