

GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS

Minutes
81st Meeting
Track Standards Committee
(1st to 3rd December 2010)

NEW DELHI

RESEARCH DESIGNS & STANDARDS ORGANISATION
LUCKNOW-226 011

81st MEETING OF THE TRACK STANDARDS COMMITTEE – DECEMBER, 2010

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INTRODUCTION

1. 81st Meeting of Track Standards Committee was held at Baroda House, New Delhi from 1st to 3rd December, 2010. Shri B.D. Garg, ED/CE(P), Shri Naveen Chopra, EDTK (P), Shri A.K.Lahoti, ED/Track Machine and Shri Satish Kumar, ED/Track (Mod) of Railway Board attended the meeting as Railway Board's observers. All the members of the TSC i.e. Director/IRICEN/Pune, CTEs of 15 Zonal Railways (except CTE/SCR & ED/GE of RDSO) and ED/Track-I, ED/TM & ED/Track-II of RDSO attended the meeting. Director/IRICEN/Pune Shri A.K.Goel was entrusted with the responsibility to chair the 81st Meeting of the TSC.

1.1 Shri A.P. Mishra, ME, Railway Board, Shri S.K. Budhlakoti, GM/NR, Shri A.K. Gupta, Advisor/B&S, Railway Board, Shri R.K. Gupta, PCE, Shri Dharam Singh CAO/C-I, Shri Surendra kumar Kaul CAO/C(P&P) of Northern Railway were also present during the Inaugural Session.

2. All the members and distinguished observers from Railway Board were welcomed by CTE/NR.

3. Executive Director/Track-I/RDSO and Member Secretary/TSC, Sh. Sonvir Singh, during his introductory address gave a brief historical resume of TSC and enumerated some of the important items to be discussed.

4 In his address Director IRICEN, Pune Shri A.K. Goel welcomed all participants and officers from Railway Board and RDSO. He especially thanked Shri S.K. Budhalakoti for permitting to host the meeting at Northern Railway Head Quarters. He further stated that during earlier meetings pending items used to be more as compared to the present thirty seven items which is an indication of deliberation of more items during earlier meetings.

4.1 He categorised the items into the following three categories:

1. Life cycle cost of Track components
2. Maintenance requirement of Track linked to TGI
3. Trial items

4.2 He emphasized that the concept of Life cycle cost should come into all the components which are procured for Track where as earlier concept was only the initial procurement cost.

4.3 He said that some instructions on Maintenance requirement of Track linked to TGI are already issued by Railway Board but in the field there are some problems in implementing these instructions and the same are required to be discussed in detail.

4.4 He also said that field trials are not being given much attention. If Zonal Railways do not conduct the trials and do not send the feed back to RDSO the item remains pending. He expressed that Zonal Railways are facing problem of fund for procurement of required components of trial items. He said that there is

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no proper system of monitoring the trials and he requested ME to look into the issue.

5. Member Engineering, Railway Board Shri A.P. Mishra attended the meeting on 01-12-10. In his address he expressed that

- 5.1** CTEs and CBEs are handpicked for better contribution in the system.
- 5.2** Instructions should be issued in a very simple language so that even Supervisors could easily understand the meaning.
- 5.3** Demand on track is increasing every day. Around 29900 RKM of track is covered in CC+8+2. In every budget around 35 new trains are introduced. Volume is increasing @ 5% per year. More axle load and more passengers are expected in future.
- 5.4** Most of the track is amenable to mechanized maintenance. Rail cutting and rail drilling machines are extensively used. Normally PWIs use those machines which are effective in utilization and minimizes efforts. Transport arrangement of small track machines should be improved.
- 5.5** Better coordination should be established with Sr DOM and DRM. There should be readiness to accept the block anytime subject to technical requirement. Longer block should be demanded. After taking block there should be some visible results like removing speed restriction and increasing speed to influence the Operating staff.
- 5.6** Better arrangements should be made for track machine staff. Presently camping coaches are in such a dilapidated condition that nobody from us would like to stay for one night. Provide rest houses for machine staff at suitable distance on the pattern of NCR.
- 5.7** Gang men work in a very difficult situation. They perform their duty during extreme weather conditions. They hardly get promotion or incentive. Presently around 15% of gang strength is lying vacant. Recruitment of Gang men may be done at AEN level through Employment Exchange and a panel of 1.5 times of vacancies may be formed. In such case if there is any complaint then only a very small portion of recruitment will be affected. Various methods may be adopted for selection of Gang men and one method may be by providing a RFID chip to every candidate. Gang men are required for patrolling, fracture repair and so many other safety works where Machines cannot be utilized
- 5.8** All arrangements should be done for manning of Level crossings.
- 5.9** Running in block sections is very good and does not require much attention however running in yards is not satisfactory. Normally points and crossings have poor running which shows that they are not given proper attention and as a result TGI of the section gets drastically reduced.
- 5.10** An accident at work site is an area of concern and recently some cases of derailment have been reported in WR and ECOR. Block should be taken where

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it is required and if work can be done in caution then for safety line could be blocked by proper protection if situation warrants. Shortcuts should not be adopted. Before leaving the site, safety of track should be ensured as there should not be any compromise with the safety.

- 5.11 Before onset of winter, weld should be examined properly. USFD testing should be done carefully. ADEN should inspect USFD testing during routine inspections Digital rail tester should be used.
- 5.12 RDSO should develop Stress free temperature measurement device.
- 5.13 Quick and proper trial of material should be done. RDSO should develop liner free fastening design.
- 5.14 Welding requires improvement. Mobile flash butt welding should be done as much as possible on the track. Development of auto thimble is hanging for quite some time.
- 5.15 Inspection should be of quality and not of volume. Super check of Subordinate inspection should be done.
- 5.16 Track renewal in yard should be done in coordination with S&T and Electrical department.
6. The meeting of the committee was structured in 6 technical sessions, during which 20 new items and 37 pending items carried forward from earlier TSC meetings were deliberated upon.
7. During the meeting three technical presentations were made by industries bringing out the highlights of new technologies/products. Following presentations were made during the meeting:
 - (i) SAIL - "Latest improvements and technology of RAIL manufacturing"
 - (ii) ED/CE(G)/RB - "WILD".
 - (iii) DIR /TMS/RB- TMS
8. It was decided during concluding session that the next Track Standards Committee Meeting will be hosted by WCR at Bhopal.
9. The TSC specially acknowledges the assistance rendered by following officers from RDSO for their valuable contribution during the 81st meeting of the Track Standards Committee:
 - (i) Shri Satya Prakash Mishra, Jt Director/Track
 - (ii) Shri Satya Prakash, Director/Track
 - (iii) Shri Alok Mishra, Director/Track
 - (iv) Shri Ashwani Kumar, Director/Track
 - (v) Shri S.K. Maurya, Director/TM
 - (vi) Shri Rajesh Agarwal, Director/GE

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10. The committee would like to place on record their gratitude and appreciation for CTE/NR and his team of officers and staff for the excellent arrangements made and the hospitality extended to all the participants.

ITEM NO.1170

SUBJECT: Renewal of 'D' marked rails
(Proposed by SR)
(Specification/T-12 & RG/RIC)

COMMITTEE'S OBSERVATIONS:

1. The existing procedure of USFD testing of 'D' marked is able to detect defects in 'D' marked rails.
2. CTE/SR suggested renewal of 'D' marked rail should be renewed at vulnerable locations.
3. The track renewal can be done on condition basis as per existing criteria of renewal.
4. CTE/NF Rly. stated that with double the frequency detection of defects is done properly.

COMMITTEE'S RECOMMENDATIONS:

Digital double tester is to be used for testing of 'D' marked rails at reduced interval to be decided by CTE of Zonal Railway and USFD should be carried out without any shortfall.

ITEM NO.1171

SUBJECT: Gauge at toe of points & crossing.
(Proposed by SER)

(PTX)

COMMITTEE'S OBSERVATIONS:

1. There is a need to have a clarity on the issue of gauge at P&C for the benefit of field supervisors and officers.
2. The wider/tighter gauge at toe of switch and over crossing is not desirable. The gauge at P&C is required to be maintained in light of above considerations.
3. The clause of uniform gauge over continuous stretch of track (IRPWM para 224 (e) (i)) can not be extended to P&C due to the limited length of P&C.
4. Correct gauge mentioned in para 237 (9) (e) of IRPWM is to be defined clearly.
5. This issue can not be decided without further study which should also be supported with field data. Hence, there is a need to form a sub committee which can go in detail and discuss the issue.

COMMITTEE'S RECOMMENDATIONS:

A committee of ED/Track-II, CTE/NR, CTE/SR & CTE/SER is to be constituted to examine the item and give suitable recommendations for approval of Railway Board.

ITEM NO.1172

SUBJECT: SEJs for curves up to 4 Degree
(Proposed by NR)

(JW/3)

COMMITTEE'S OBSERVATIONS:

1. The trials of improved SEJ of two firm's design up to 2⁰ have been conducted. The performance of these designs has been found satisfactory in field.
2. There is a need to develop SEJs up to 4⁰ as LWR can be continued up to 4⁰.
3. The trial of earlier design of 2⁰ can be extended up to 4⁰.
4. There is a need to develop technology for continuing LWR through Points & Crossings to avoid laying of SEJs on curves. RDSO informed that the same has been developed and Railway Board is procuring Weldable CMS crossing for this purpose.
5. Ballast resistance will reduce on 4⁰ curve by providing SEJ on curve.

COMMITTEE'S RECOMMENDATIONS:

1. RDSO should develop the SEJs for laying in curve up to 4⁰ in consultation with Railway Board.
2. SEJs shall be laid on curves of 2⁰ to 4⁰ curvature for trial at ECoR, NFR and SR.

ITEM NO.1173

SUBJECT: Provision of online printing facilities in PC-based OMS equipment
(Proposed in CTE's seminar 2008)

(TM/GL/70 (81st))

COMMITTEE's OBSERVATIONS:

1. RDSO to expedite the finalization of specification.

COMMITTEE's RECOMMENDATIONS:

1. Specification for PC based OMS equipment by incorporating the provision of online printing should be finalized within six months.

ITEM NO.1174

SUBJECT: Revision of Specification and fixing life cycle for avoiding frequent failure of glued joints.
(Proposed by CR in CTE's seminar 2009)

(MT/GJ)

COMMITTEE's OBSERVATIONS:

1. Design of Glued Joint fish plate to be revised so that normal on track tampers can tamp the track on Glued Joints.
2. Fish plate design of insulated joints is to be examined from above aspect and improving strength of Glued Joint.
3. Zonal Rlys to ensure proper maintenance of Glued Joints.
4. GJ clip to be used for required toe load instead of 'J' clip.
5. Codal life of Glued Joints has not been prescribed. Looking into failure of Glued Joints, life of Glued Joints can be tentatively fixed at 200 GMT.
6. S.Rly, W.C. Rly and C. Rly. are to provide failure data on Glued Joints urgently.
7. Effort to improve quality of Glued Joints to be continued including providing inspection of Glued Joints fish plates.

COMMITTEE's RECOMMENDATIONS:

1. RDSO to undertake revision of design of Glued Joint fish plate so that it can be tamped with normal on track tampers and its strength is improved.
2. Inspection of fish plates before manufacturing of Glued Joints can be introduced for the present design of Glued Joint. All other items should also be inspected before assembly of Glued Joint.
3. Zonal Rlys. to use GJ clips at Glued Joint and ensure proper packing and maintenance.
4. Life cycle of Glued Joints can be tentatively fixed at 200 GMT. WCR, CR & SR to supply Glued Joint failure data to RDSO at the earliest for the life cycle.
5. Efforts to improve quality of Glued Joint to continue by studying design of other countries and R&D in this regard.

ITEM NO.1175

SUBJECT: Push trolley wheels suitable for digital axle counter
(Proposed in CTE's seminar 2009)

(TM/GL/70 (81st))

COMMITTEE's OBSERVATIONS:

1. RDSO should also explore the possibility of reducing the weight of trolley. Weight of the wheel should be reduced by RDSO while developing new drawing suitable for digital axle counter zone.

COMMITTEE's RECOMMENDATIONS:

1. Drawing of push trolley wheel suitable for digital axle counter zone by reducing the weight of the wheel should be developed by RDSO within two months.

ITEM NO.1176

SUBJECT:

- (i) Experience of tamping based on TM 115
- (ii) Experience on Tamping based on TM – 115
- (iii) TM-115 report has not been implemented on Northern Railway
(Proposed in CTE's seminar 2009 & 2010)

(TM/GL/70 (81st))

COMMITTEE'S OBSERVATIONS:

The recommended level of TGI post tamping can not be achieved without carrying out pre and post tamping works. Different standard can be developed by considering special features of sections. Review of TGI formula can be done by reassigning weightage to various indices as at present weightage of 6 has been given to alignment. Standard can be developed by mentioning average TGI instead of CFD as it will be easier for field staff to calculate average TGI. Present standard can be implemented on block section basis.

COMMITTEE'S RECOMMENDATIONS:

1. Zonal Railways should implement the existing instructions seriously and feed back to be given to RDSO. Based on the feed back of Zonal Railways, RDSO should work on developing different standards in different slabs, considering special feature of the sections.
2. Present standard/criteria of tamping can be adopted on block section basis and feedback given to RDSO for study and further instructions if any.

ITEM NO.1177

SUBJECT: Anomalies in IRPWM & LWR Manual
(Proposed by NWR in CTE's seminar 2010)

(IRPWM & IM/LWR)

COMMITTEE's OBSERVATIONS:

1. PWM's competency has improved, so he can be entrusted for supervision of deep screening and lifting/lowering of track so, existing provisions of LWR manual for supervision of deep screening and lifting/lowering of track by PWM may be continued and IRPWM should be amended.
2. Ballast profile in LWR Manual is having flatter slope which is closer to field observations, hence ballast profile of LWR manual should be continued and IRPWM should be amended as per provisions of LWR Manual.

COMMITTEE's RECOMMENDATIONS:

1. Provisions of LWR manual can be continued for supervision of deep screening and lifting/lowering of track by PWM level. Provisions of IRPWM should be amended.
2. Ballast profile of LWR Manual can be continued and provision of IRPWM should be amended as per LWR Manual.

ITEM NO.1178

SUBJECT: Threshold values for load testing of in service rails by FBW
(Proposed by SCR in CTE's seminar 2010)

(JW/C)

COMMITTEE's OBSERVATIONS:

1. The values of transverse breaking load obtained in test conducted in SCR in two cases are above requisite value of 100 T and in only one case is slightly less than 100 T. On this ground provision of Flash Butt Welding Manual cannot be changed. The existing provisions of Flash Butt Welding Manual should be continued.
2. If rails are worn to such extent that they give lower transverse breaking load then such rail should not be used.

COMMITTEE's RECOMMENDATIONS:

1. The existing provisions of Flash Butt Welding Manual for transverse load test should be continued. Item may be closed.

ITEM NO.1179

SUBJECT: Standard of track maintenance to C&M-(Vol.1)
(Proposed by CR in CTE's seminar 2009)

(DG/Research)

COMMITTEE's OBSERVATIONS:

1. Track Geometry Standards of C&M-1 Vol.-I is already a part of Para 607 (2) of IRPWM manual with relaxed provision of Unevenness as 10mm to 15mm.
2. Track Geometry Standards of C&M-1 Vol.-I was for speed of 120 kmph.
3. Track Geometry Standards in IRPWM as per Para 607 (2) needs a relook as the same are not achievable in the field up to 110 kmph as per TGI criteria for track tamping.

COMMITTEE's RECOMMENDATIONS:

1. TSC is of the opinion that provision of IRPWM 607 (2) should apply for speed of more than 110 and up to 140 kmph. SAG committee should examine the same.
2. Policy circular no.6 of Railway Board for speed potential of Rolling Stock also needs modification as per provision of IRPWM for speed up to 140 kmph. SAG committee nominated by Railway Board should also examine the same.

ITEM NO.1180

SUBJECT: Reflective type indicator boards
(Proposed by SER)

(MS/SD/WW)

COMMITTEE'S OBSERVATIONS:

1. All Engineering sign boards should be retro reflective boards as per specification approved by Railway Board 'Encapsulated type'.

COMMITTEE'S RECOMMENDATIONS:

1. All Engineering sign boards should be retro-reflective board. The instructions issued vide Railway Board's letter No. 94/CE-II/Tk/4 dated 17-8-2000 should be withdrawn.

ITEM NO.1181

SUBJECT: Extra clearance on curves

(SD/Rev/BG/MG)

COMMITTEE's OBSERVATIONS:

1. OHE mast foundation comes in the range of working of BCM.
2. Implantation of OHE for new works is 2.8m.
3. Centre to centre spacing is 5.3 m should be for straight track.
4. OHE mast and signal should not be provided to infringe the provisions of 5.3 m track centers.

COMMITTEE's RECOMMENDATIONS:

1. Condition of 5⁰ curve for track centre to centre distance of 5300 mm is to be removed from SOD 2004.
2. Provision of 5.3 m track centre should be adopted for straight track and extra clearance on curve should be provided as per requirement in addition to this distance.
3. OHE mast and Signal post should not be provided between tracks to infringe this provision of 5.3 m as the same will create problem in maintenance of track by Ballast Cleaning machine.

ITEM NO.1182

SUBJECT:

Clips with higher toe load being used on Indian Railways
(Proposed by Track Design Directorate of RDSO)

(FD/2/ERC MK-V, EF/Trial & Insp/ERC-G clip/Logwell)

COMMITTEE'S OBSERVATIONS:

1. ERC Mk-III is giving toe load in the range of 700-800 kg in the field which is considered inadequate.
2. The toe load requirement of 1045 kg on LWR consideration for 60 kg UIC Rail and 1660 sleeper/Km for Zone-IV.
3. The performance of ERC Mk-V and G-clip has been found satisfactory since it is laid in initial trial five year back.
4. The required toe load is achievable and sustainable in both the clips.
5. As per CTE/ECOR, the performance of G-clip is better than ERC Mk-V with regard to toe load, maintainability, driving weight etc.

COMMITTEE'S RECOMMENDATIONS:

1. Toe load requirement of 1045 kg on LWR consideration which is not being achievable by ERC Mk-III and since both the clips are (ERC Mk-V & G-clip) meeting the requirement of toe load under field condition after service of five years, these should be adopted on Indian Railways for regular use.

ITEM NO.1183

SUBJECT: Restoring whistle board distance from level crossing from 350 m to 600m on single line. Ref: Para 916 (1) (i) of IRPWM.
(Proposed by RDSO)

(IRPWM & LC/Safety)

COMMITTEE'S OBSERVATIONS:

1. It is agreed that whistle board distance from level crossing provided in para 916(1) (i) of IRPWM should be restored to 600m and drivers should be instructed to whistle continuously.
2. 600 m distance is required so that adequate reaction time is available for road users regarding approaching train.
3. The provision of 600m is already existing for double line.

COMMITTEE'S RECOMMENDATIONS:

1. The provisions of para 916(1)(i) should amended so that distance of whistle board from level crossing on single line is restored to 600m.
2. Instruction should be issued to drivers to whistle from whistle board up to level crossing continuously for warning to road users regarding approaching train.

ITEM NO.1185

SUBJECT: Provision of wicket gates for on foot road users.
(Proposed by NFR)

(IRPWM)

COMMITTEE's OBSERVATIONS:

1. The provision of wicket gates does not exist in IRPWM Annexure 9/1 of para 904 for 'C' class level crossing.
2. Requirement of wicket gate should be assessed on each level crossing and if needed the same should be provided.

COMMITTEE's RECOMMENDATIONS:

1. Requirement of wicket gate should be considered on need basis and provision of IRPWM Annexure 9/1 of Para 904 should be amended accordingly for 'C' class level crossing.

ITEM NO.1186

SUBJECT: Abolition of THOD system.
(Proposed by NFR)

(IM/LWR)

COMMITTEE's OBSERVATIONS:

1. With the abolition of THOD system in engineering department, the provisions of LWR Manual need amendments.
2. In Para 3.4 of LWR Manual the word 'Territorial Chief Engineer' should be replaced by 'Chief Track Engineer' and word 'Chief Track Engineer' should be replaced by 'Principal Chief Engineer'.
3. In Para 8.2.5 of LWR Manual the word 'Territorial Chief Engineer' should be replaced by 'Chief Track Engineer' but this Para should be reworded the extent the exception report to be submitted only when orders of Chief Track Engineer are required.
4. In Para 9.1.8 of LWR Manual the word 'Territorial Chief Engineer' should be replaced by 'Chief Track Engineer'.

COMMITTEE's RECOMMENDATIONS:

1. In Para 3.4 of LWR Manual the word 'Territorial Chief Engineer' should be replaced by 'Chief Track Engineer' and the word 'Chief Engineer' should be replaced by 'Principal Chief Engineer'.
2. In Para 8.2.5 of LWR Manual the word 'Territorial Chief Engineer' should be replaced by 'Chief Track Engineer' but this Para should be reworded to the extent that the exception report to be submitted only when orders of 'Chief Track Engineer' are required.
3. In Para 9.1.8 of LWR Manual the word 'Territorial Chief Engineer' should be replaced by 'Chief Track Engineer'.

ITEM NO.1187

SUBJECT: Provision of Pathways on long girder bridge for inspection and maintenance.
(Proposed by Railway Board)

(SD/REV/BG/MG)

COMMITTEE's OBSERVATIONS:

1. Pathway should be for PSC bridges also and for all type of bridges especially major and important bridges in addition to trolley refuges.
2. In existing bridges it should be provided wherever possible and for new bridges is must be provided.
3. For existing bridges strengthening of bridge may be required.
4. Pathways are required for Gangmen and Keymen.
5. Pathway should not be accessible for Motorcycle.
6. SR, WCR and SECR will send drawing of Pathway for steel and PSC bridges.
7. Providing Pathway inside of girder beyond sleeper.

COMMITTEE's RECOMMENDATIONS:

1. Pathway should be provided on all existing major and important bridges wherever possible and on all new major and important bridges to ensure safety and maintenance requirement.
2. Pathway should be provided inside of the track on through girder bridges to avoid misuse by public and accordingly proper design may be developed by RDSO.

ITEM NO.1188

SUBJECT: Trial policy for track items.

RDSO FILE REF: CT/Policy

AGENDA:

To decide trial policy for track items.

NOTES BY SECRETARY:

Committee may decide the trial policy for track items to expedite the field trial on Zonal Railways.

COMMITTEE'S OBSERVATIONS:

There is a problem of fund for trial of components in the field, provision of fund should be made for field trials to expedite the field trial on Zonal Railways.

COMMITTEE'S RECOMMENDATIONS:

There is a constituted committee of Railway Board to frame trial policy for all R&D items, the matter of arrangement of funds and other issues related to locations etc. for trial should be referred to the committee for deliberations and necessary recommendations to Railway Board for expediting field trial on Zonal Railways.

ITEM NO.1189

SUBJECT: Provision of Notch at bottom of joggle fish plate.
(Proposed by NWR)

RDSO FILE REF: CT/FF

AGENDA:

North Western Railway has proposed the item as under:-

As per Para 429 & Para 277 (A) (T) of IRPWM AT welds are to be joggle fish plated on outer rails of curve and on bridge approaches. Joggle fish plating of AT welds is also to be carried out on 'DFW' welds. On NWR, there have been some welds failures with horizontal fracture at rail web at the location of weld resulting in a gap at fracture site to an extent of 200-225mm which can be a potential cause for derailment. On investigation, it is found that this type of fractures occurred due to point load transferred by joggle fish plates at the weld collar on bottom flange at the location of riser projecting above the weld collar. Existing design of joggle fish plate provide for only 10mm notch at the bottom to allow for weld collar. In field there are imperfections at the location of riser due to improper and premature removal of mould while doing the welding. This type of problem is seen more in case of old gauge converted sections where as welding was resorted to en masse. Hence it is suggested that notch provided at bottom of fish plate should be at least 20mm on the radius of rounded portion in the centre should be increased ensuring that no portion of joggle fish plate come in contact with weld collar.

NOTES BY SECRETARY:

Committee may deliberate.

COMMITTEE's OBSERVATIONS:

Presentation on failure of joggled fish plate AT welded joints was made by CTE/NWR in which photographs of broken joints were shown. These failures of AT welding joints are due to improper finishing of joints after welding i.e. improper removal of riser. The provision of 20mm notch will make the fish plate weaker. Instead, execution of weld by following laid down procedure should be ensured:

COMMITTEE's RECOMMENDATIONS:

The provision of 20mm notch in joggled fish plate will make the joggled fish plate weaker. Instead, AT welding should be done by following laid down procedure. In case of improperly finished joints, joggled fish plate should be provided after finishing the joints properly.

ITEM NO.1190

SUBJECT: Measurement of Rail stresses and stress free temperature of LWR by non destructive portable state of art equipment.

RDSO FILE REF:

AGENDA:

Measurement of Rail stresses and stress free temperature of LWR by non destructive portable state of art equipment.

NOTES BY SECRETARY:

RDSO has sent global EOI to Railway Board for approval.

COMMITTEE's OBSERVATIONS:

Committee observed that instead of procurement of equipment for measuring rail stresses and stress free temperature service contract for same may be done. When system is established its procurement can be considered.

COMMITTEE's RECOMMENDATIONS:

Committee recommends that instead of procurement, service contract should be done.

ITEM NO.1184

SUBJECT: REVIEW OF PENDING ITEMS

S. No.1:

SUBJECT: Review of accident proforma for measurement of Rolling stock.

(958/73/02/Safety) (1167/1/80)

COMMITTEE'S OBSERVATIONS:

1. Revised accident proforma for measurement of Rolling stock sent by RDSO to Railway Board was shown to the committee and committee expressed satisfaction on important items included in said proforma.
2. Committee requested Railway Board to finalise the issue.

COMMITTEE'S RECOMMENDATIONS:

1. Railway Board is requested to finalise the proforma for measurement of Rolling stock.

S. No.2:

SUBJECT: LWR/CWR over Ballasted Deck Bridges. (Provision of LWR with SEJ on pier to pier, continuation of LWR on Bridges, development of code of practice similar to UIC code 774-3R. Trials of continuation of LWR with multi span bridges with/without ballasted deck.).

(982/7th Ext./02/IM/LWR) (1167/2/80)

(1091/77/IM/LWR) (1167/2/80)

(1092/77/IM/LWR) (1167/2/80)

(1093/77/IM/LWR) (1167/2/80)

COMMITTEE'S OBSERVATIONS:

1. The issue is being deliberated by HAG committee.
2. The presentation on issue of additional rail stresses coming in rail due to track bridge interaction in respect of total stresses coming on rail along with possible solutions i.e. provision of NCC and Cu-MO rails was made and discussed.
3. Committee should expedite finalization of its recommendations.

COMMITTEE'S RECOMMENDATIONS:

1. HAG committee is requested to finalization of its recommendation and submission of report to Railway Board.

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S. No. 3:

SUBJECT: Possibility of permitting 26m rails on major and important bridges.

(986/74/JW/SWR) (1167/4/80)

COMMITTEE's OBSERVATIONS:

1. Since the draft correction slip to IRPWM has been sent Railway Board. Railway Board is requested to expedite its approval and issue.

COMMITTEE's RECOMMENDATIONS:

1. Railway is requested to approve and issue the correction slip.

S. No. 4:

SUBJECT: Modification in design of combination fish plate
(1015/74/FF) (1167/5/80)

COMMITTEE's OBSERVATIONS:

1. CTE/SER informed that so far agency for designing and fabrication of modified combination fish plate could not be found.
2. CTE/SER assured that he will further try to locate agency for design and fabrication of modified combination fish plate.

COMMITTEE's RECOMMENDATIONS:

1. CTE/SER is requested to expedite design and fabrication of modified combination fish plate.
2. CTE/SER should send the detailed of modified combination fish plate to RDSO within three months for technical check of design and further action.

S. No. 5:

SUBJECT: Change of Rail Section in LWR/CWR.

(1042/75/ IM/LWR) (1167/6/80)

COMMITTEE's OBSERVATIONS:

1. None of the Zonal Railways have submitted demand of junction forged rails to Railway Board.
2. Zonal Railways should expedite submission of demand of junction forged rails to Railway Board.

COMMITTEE's RECOMMENDATIONS:

1. Zonal Railways should submit the demand of junction forged rails to Railway Board within a month.

S.No.6:

SUBJECT : Modification in the lifting barrier assembly for level crossings.

(1070/76/EL) (1167/8/80)

COMMITTEE's OBSERVATIONS:

1. CR, SCR, WR and WCR have not done trial of modified lifting barrier.
2. Zonal Railways are using drawing of Signal Directorate of RDSO for provision of lifting barriers at level crossing and procuring the same through approved list of vendors of Signal Directorate of RDSO so that same lifting barrier can be used for interlocking with least modification and least additional expenditure.
3. In view of the same, no further trials need to be conducted.

COMMITTEE's RECOMMENDATIONS:

1. Item may be closed in view of availability of drawing of lifting barrier of Signal Directorate of RDSO and its usefulness for interlocking due to increase in TVU.
2. Item will be referred to S&T directorate for comments on the design of SR.

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S. No. 7:

SUBJECT: Machine Maintenance of Track

(1073/76/TM/GL/70) (1167/9/80)

COMMITTEE's OBSERVATIONS:

1. In depth study of world wide practices of other world Railways should be carried out by RDSO. In this regard various World Railways can be approached and help of Railway Advisors may also be taken.
2. Literature study to be completed in six months time positivel.

COMMITTEE's RECOMMENDATIONS:

RDSO should further carry out in depth study of world wide practices of other world Railways and put up technical report to the committee formed for this purpose within six months time positively..

S. No.8:

SUBJECT: Non-destructive stress free temperature measurement of CWR
by force application method.
(1077/76/IM/LWR/RSM) (1167/11/80)

COMMITTEE's OBSERVATIONS:

1. CTE/NER informed that equipment with Lucknow Division of NE Railway was out of order which has been repaired by bringing spare parts from Manmad Workshop.
2. The trial to validate the equipment can be conducted on nominated section of NE Railway within a month.
3. Other Zonal Railways should conduct further trials to validate the equipment.

COMMITTEE's RECOMMENDATIONS:

1. NE Railway to expedite and conduct trial within a month in association with RDSO to validate the equipment as per trial scheme prepared by RDSO.
2. Other Zonal Railways should continue trial of equipment for measurement of non-destructive stress free temperature by force application method and submit report to RDSO about the reliability of the equipment.

S. No.9:

SUBJECT: Review of Rail Stress Calculation Methodology

(1078/76/Track Stress/FEM & DG/Research) (1167/12/80)

COMMITTEE's OBSERVATIONS:

1. There is a need to study management of contact stress in rail top to reduce RCF defects on heavy axle load by control of rail wheel interaction by rail grinding.
2. CTEs should send the details as per the monitoring format of rail profile grinding for test sites on SCR, NCR & ECoR before and after grinding to RDSO.

COMMITTEE's RECOMMENDATIONS:

1. CTEs should send the details after introduction of rail grinding as per the monitoring format of rail profile grinding for test sites on SCR, NCR & ECoR before and after grinding to RDSO for study of reduction in contact stress.
2. Increase in Rail life will also be studied by RDSO on account of control of contact stress and RCF.

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S. No.10:

SUBJECT : Revision of work load of PWIs.

(1087/77/IRPWM) (1167/13/80)

COMMITTEE's OBSERVATIONS:

1. Railway Board order on 80th TSC recommendation are awaited from Railway Board.

COMMITTEE's RECOMMENDATIONS:

1. Railway Board is requested to issue orders on 80th TSC recommendations already sent.

S. No.11:

SUBJECT: Criteria for re-alignment of curve

(1055/75/IRPWM) (1167/14/80)

COMMITTEE'S OBSERVATIONS:

1. Presentation on RDSO's reply to issues raised by Railway Board was made along with revised draft correction slip suggested by RDSO.
2. Railway Board may take further decision.
3. Rate of change of lateral acceleration should be 1.0m/sec.^3 on circular portion.

COMMITTEE'S RECOMMENDATIONS:

1. Railway Board is requested to give further decision on the basis of draft correction slip suggested by RDSO vide letter no. CT/IRPWM dated 16.11.2010 for modification in the same for rate of change of lateral acceleration as 1.0m/sec.^3 on circular portion for speed up to 160kmph.

S.No.12:

SUBJECT: Necessity of detailed guidelines for USFD testing of Tongue Rails and CMS crossings.

(1098/78/USFD) (1167/15/80)

COMMITTEE's OBSERVATIONS:

1. During normal USFD testing, SEJ tongue rail is not tested but hand probing is done as per para 11.8.2 of USFD manual.
2. During normal USFD testing, flaw is not detected in SEJ as per procedure laid down in para 11.8 of USFD Manual 2006.
3. M&C directorate of RDSO should check whether USFD testing of SEJ is effective or not as per procedure laid down in USFD manual 2006.
4. Roughness on machined portion on SEJ should be monitored to avoid sudden fractures.

COMMITTEE's RECOMMENDATIONS:

1. Sample of fractures of tongue rail and CMS crossing along with fracture investigation replies should be sent to RDSO by zonal Railways for finalizing guidelines for USFD testing of tongue rail, SEJ tongue rail and CMS crossings.
2. RDSO should finalise the USFD testing method for tongue rail, SEJ and CMS crossing on the basis of non detected flaws observed in fractures of these components. This should be done within next three months or early.
3. Till such time procedure is evolved hand probing of SEJ tongue rails should continue as per provision of USFD manual.

S.No.13:

SUBJECT: Corrosion on rails at contact points of liners resulting into fractures

(1102/78/ACP/RP) (1167/16/80)

COMMITTEE's OBSERVATIONS:

1. Railway Boards orders on 80th TSC recommendation along with action taken on them were discussed. Action on them is to be monitored.
2. Vossloh type fastening which is liner cum fastening system has already been tried in IR and performing satisfactory. This fastening may be adopted.
3. RDSO is also trying to develop the liner free fastening system for existing PSC sleeper and fastening assembly.

COMMITTEE's RECOMMENDATIONS:

1. Action on Rly. Board orders to be expedited and monitored closely.
2. Vossloh type fastening system or similar may be adopted.
3. RDSO expedite the development of liner free fastening system for existing PSC sleeper and existing fastening assembly.

S. No.14:

SUBJECT : Maintenance of Steel channel sleeper
(1121/79/JE)(1167/19/80)

COMMITTEE's OBSERVATIONS:

1. Committee consisting of ED/B&S/RDSO, ED/Track-II/RDSO, CTE/SWR, CTE/SECR & CTE/SCR has finalized the proposed new para to be included in IRPWM for maintenance of Steel channel /H beam sleeper. CTE/SWR presented the new para to the members of TSC.
2. All the members agreed to the recommendations of committee for introduction of new Para in IRPWM for steel channel sleeper.

COMMITTEE's RECOMMENDATIONS:

1. The proposed new para for maintenance of Steel channel/H beam sleepers should be sent to Railway Board for approval as a correction slip to IRPWM.
2. After approval of Railway Board, this item may be closed.

S.No. 15:

SUBJECT : Standard deviation based track maintenance standards for 130Kmph to 160Kmph and spot values for 140Kmph to 160 Kmph.

(1124/79/ TM/GL/70 79th) (1167/20/80)

COMMITTEE's OBSERVATIONS:

1. RDSO should expedite the fixing of transition coupling in LHB coaches of RDSO and thereafter conduct the trial.

COMMITTEE's RECOMMENDATIONS:

1. Trial to fix standard deviation based track maintenance standard should be conducted within next six months after fixing the transition coupling in LHB coaches of RDSO.

S.No. 16:

SUBJECT : Improving small track machine organization

(1125/79/TM/GL/70 79th) (1167/21/80)

COMMITTEE's OBSERVATIONS:

S.No. 1 (A to H except C) – Correction slip to Indian Railways Small Track Machine Manual is being issued by RDSO which should be issued within 15 days.

S.No. 1 C – RDSO should regularly review the specification of Small Track Machine.

S.No. 2 – Board has already issued instruction for pilot project of MMU.

COMMITTEE's RECOMMENDATIONS:

S.No. 1 (A to H except) – Recommended for closure as correction slip to Indian Railway Small Track Machine Manual is being issued.

S.No. 1 C – Recommended for closure.

S.No. 2 – Recommended for closure.

S.No. 17:

SUBJECT : Reduction in thickness of end post of glued joints.

(1127/79/CT/MT/GJ) (1167/22/80)

COMMITTEE's OBSERVATIONS:

1. The use of better material for end post to reduce its thickness to 6mm has to be done in conjunction with improvements the glued joints to enhance its service life, hence this item needs to be clubbed with item no. 1174.
2. The process for invitation of Global EOI for developing improved glued joints for better service life along with reduced thickness of end post should be expedited by RDSO.

COMMITTEE's RECOMMENDATIONS:

1. This item may be clubbed with item no. 1174 regarding improvement in design of improved glued joint.
2. RDSO to expedite the process of development of improved glued joint with reduced thickness of end post and improved material.

S.No.18:

SUBJECT : Formation treatment and recommendations of RDSO for treatment other than blanketing.

(1128/79/GE/Gen/13 TSC Vol-X) (1167/23/80)

COMMITTEE's OBSERVATIONS:

1. Committee discussed the issue and asked SCR to complete the trials for geogrid form the available 15 types of geogrids. SCR assured to complete the trials with in 6 months as per the scheme given by RDSO.
2. Railway Board may procure high performance formation treatment machine which can lay geogrid also.

COMMITTEE's RECOMMENDATIONS:

1. SCR to carry out trials of available geogrid 15 in nos. within six months and send trial report to RDSO.
2. Railway Board may procure high performance formation treatment machine.

S.No.19:

SUBJECT : Issues pertaining to improvement in A.T.Welding.

(1133/79/CT/Welding/Policy) (1167/26/80)

COMMITTEE'S OBSERVATIONS:

1. M&C directorate of RDSO is to submit the trial report by March 2011.
2. SCR should submit the detailed report of thermometer and its specification for trial by RDSO.

COMMITTEE'S RECOMMENDATIONS:

1. SCR should submit the detailed report of thermometer and its specification for trial by RDSO.
2. RDSO should finalization the issue and send correction slip of thermit welding manual to ensure proper heating of rail ends and as additional check by digital rail thermometer in addition to prescribed pre heating time for pre heating of rail ends in the manual.

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S.No.20:

SUBJECT : Use of 70⁰ (2MHz) 8mm probe for detection of Half Moon Crack.

(1134/79/CT/USFD) (1167/27/80)

COMMITTEE's OBSERVATIONS:

1. Correction slip for detection of half moon crack using side looking probe has been issued by RDSO vide letter no. CT/USFD dated 26/28.05.2010.

COMMITTEE's RECOMMENDATIONS:

1. Item may be closed as correction slip no. 05 of May 2010 to USFD manual has already been issued.

S.No.21:

SUBJECT : Carrying out deep screening by BCM at a speed of 40kmph.

(1136/79/TM/GL/70 79th) (1167/28/80)

COMMITTEE's OBSERVATIONS:

1. Draft correction slip to IRPWM submitted by RDSO is under consideration of Railway Board.
2. Correction slip should be revised to include 4 hours effective traffic block during day 5 hrs during night.

COMMITTEE's RECOMMENDATIONS:

- 1 RDSO will revise the correction slip to include 4 hours effective traffic block requirement during day 5 hrs during night.

S.No.22:

SUBJECT : Maintenance problem in 1 in 12 fan shaped layout.

(1142/79/CT/PTX) (1167/30/80)

COMMITTEE's OBSERVATIONS:

1. RDSO has modified the drawing for special bearing plates at sleeper no. 24, 25, 26 & 27 for holding tongue rail by steel shoulder (RT-7074). This drawing has been circulated to all zonal railways vide letter no. CT/PTX dated 22.06/16.07.10.
2. CTE/SWR informed the committee that the special bearing plates as per modified drawing are functioning satisfactorily in field.

COMMITTEE's RECOMMENDATIONS:

1. Since the performance of special bearing plates at sleeper no. 24, 25, 26 & 27 for holding tongue rail as per modified drawing is satisfactory; all zonal railways should adopt the modified drawing for special bearing plates on fan shaped layout.
2. This item is recommended for closure.

S.No.23:

SUBJECT : Yardstick for USFD testing.

(1143/79/CT/USFD) (1167/31/80)

COMMITTEE's OBSERVATIONS:

1. Central, Western and N.F Railway to expedite the work study report using analogue as well as digital rail/weld tester.
2. Committee has not met even once.

COMMITTEE's RECOMMENDATIONS:

1. Central, Western and N.F Railway to under take the work study using analogue as well as digital rail testers/weld testers and submit report to RDSO for consideration by committee.
2. Committee should finalize the report of work study within next three months and submit to Railway Board for consideration.

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S.No.24:

SUBJECT : Visibility requirement for unmanned LCs

(1147/80/ EL)

COMMITTEE's OBSERVATIONS:

1. Draft correction slip to IRPWM submitted by RDSO is under consideration of Railway Board.

COMMITTEE's RECOMMENDATIONS:

1. Railway Board is requested to expedite approval and issue correction slip to IRPWM.

S.No.25:

SUBJECT : Discrepancies in IRPWM & USFD Manual regarding provisions pertaining to metallurgical testing of rails/welds.

(1148/80/ IRPWM, USFD & AT Welding Sub Committee)

COMMITTEE's OBSERVATIONS:

1. Draft correction slip to IRPWM is under consideration of Railway Board.
2. RDSO to expeditiously submit draft correction slip to USFD manual and AT welding on issue of correction slip to IRPWM.

COMMITTEE's RECOMMENDATIONS:

1. Railway Board is requested to expedite approval and issue correction slip to IRPWM.
2. RDSO to expeditiously submit draft correction slip to USFD manual and AT welding manual to Railway Board for approval after issue of correction slip to IRPWM by Railway Board in reference to item 1 above.

S.No.26:

SUBJECT : Flaw detected in SKV welds with 3 piece moulds by 45⁰ 2 MHz single crystal probe

(1150/80/ USFD & Welding/Policy)

COMMITTEE's OBSERVATIONS:

1. Matter may be closed as there is improvement in results obtained by testing of AT welds using digital AT weld testers.

COMMITTEE's RECOMMENDATIONS:

1. Item may be close as procedure has already been issued by RDSO.
2. Digital weld testers should be used to avoid false DFW flaws in welds.

S.No.27:

SUBJECT : Maintenance of thick web switches

(1151/80/ TWS)

COMMITTEE's OBSERVATIONS:

1. RDSO has developed a proforma for inspection of thick web switches with location of wear measurement and this proforma has been circulated to all zonal railways vide letter no. CT/PTX dated 30.7.2010 for their comments. However, none of the zonal railways have sent comments to RDSO till now.
2. CTE/CR informed that recording of knife edge included in proforma is not required in case of thick web switches.
3. Members of the TSC observed that there should be only one proforma for inspection of Points & Crossings for both overriding and thick web switches.

COMMITTEE's RECOMMENDATIONS:

Zonal railways should send comments to RDSO on the proforma developed by RDSO for maintenance of thick web switches . After getting the comments, RDSO should finalize the proforma for inspection of thick web switches.

S.No.28:

SUBJECT : Maintenance of Spring Setting Devise :

(1152/80/ TWS)

COMMITTEE's OBSERVATIONS:

1. As decided in the last meeting, zonal railways have not sent report on maintenance problem of SSD in field. Nor did they suggest maintenance procedure to RDSO.
2. However, RDSO has developed laying and maintenance instructions along with proforma to record the performance of SSD. The same has been circulated to all zonal railways vide letter no. CT/PTX/TWS/Design dated 23.11.2010.

COMMITTEE's RECOMMENDATIONS:

Zonal railways should send their comments on laying and maintenance instructions developed by RDSO at the earliest. After getting the comments from zonal railways, RDSO should finalize the laying and maintenance instructions of SSD.

S.No.29:

SUBJECT : Emergency sliding boom at level crossing gates.

(1154/80/ LC/Safety)

COMMITTEE's OBSERVATIONS:

1. CTEs felt that provision of additional boom is not required and existing chain arrangement is sufficient.
2. The item may be closed.

COMMITTEE's RECOMMENDATIONS:

1. Railway Board is requested to close the item as the existing safety chain arrangement is adequate as an emergency lifting barrier on level crossing.

S.No.30:

SUBJECT : Formulation of procedure for testing of vertical flaws in USFD testing.

(1156/80/ USFD)

COMMITTEE's OBSERVATIONS:

1. SCR has conducted trial to detect vertical transverse flaw with 73.5° and WR with 73° and this will replace 70° probe.
2. Results are satisfactory as conducted by 73.5° by SCR and 73° probe by WR for detecting vertical flaws.
3. RDSO has suggested some more study with flat bottom artificial vertical transverse defects.

COMMITTEE's RECOMMENDATIONS:

1. SCR and WR should submit detailed report as desired by RDSO vide letter no. CT/USFD dated 17.09.10 and 03.11.10 respectively for testing of vertical flaw.
2. On getting report from SCR and WR, RDSO should standardize 73°/73.5° probe for testing of transverse flaws including vertical transverse defects in rail head.

S.No.31:

SUBJECT : Minimum track centre for new 3rd and 4th lines.

(1157/80/ SD/Rev/BG/MG)

COMMITTEE's OBSERVATIONS:

1. If track center to center distance is not increased then safety of trackmen will be endangered.
2. No trolley on middle line inspection is going on.
3. In suburban section trolley is not operated.
4. Mega block should be introduced on suburban sections for push trolley inspection of track as well as multiple lines.

COMMITTEE's RECOMMENDATIONS:

1. Centre to Centre distance of track for 3rd and 4th lines should be 7.8 m from safety consideration of trackmen doing track maintenance for new lines.
2. Mega block should be introduced on suburban sections and multiple lines for inspection of track by push trolley as center to center distance can not be increased for the existing tracks.
3. Area should be demarcated outside the moving dimensions of the train in both directions for use of patrol man & keyman on multiple lines.

S.No.32:

SUBJECT : Trial of different fastening components on Indian Railways.

(1160/80/ EF/TRIAL)

COMMITTEE's OBSERVATIONS:

1. Thermoplastic elastomeric pad has been laid by NR, NCR, ECoR, SCR and CR and about one year time has passed. The pads laid in NCR has been inspected by RDSO for six months performance.
2. Improved Rubber pad trial can be deferred for the time being as testing machine of impact attenuation and inclined repeated load test are being procured by M&C Directorate of RDSO. CTE/CR proposed that these tests can be done in laboratory out side India. If Central Railway get these tests done outside India in any Lab, they can procure the item for trial.
3. Nylon cord reinforced GRSP for turn out have not been procured by zonal Railways. Some Zonal Railways have called tenders. Trial of this item should be expedited.
4. Rail pad developed by M/s Rawatsons - Only SCR has laid these pads. Other railway are in process of procurement. SCR should send the report on proforma in one month.
5. Insulated metal liner developed by M/s Rawatsons - Only SER has procured these insulated metal liner. Other railways are in the process of procurement.
6. ERC Mk-V and G-clip has been discussed in TSC as separate item (item no. 1182).
7. PSC sleepers for 25 t – ECoR and SER have placed PO. Laying of these sleepers is to be done at the earliest.
8. Insulated fitting for steel channel sleeper – Joint performance report has not been sent by any railways except SCR. SCR has reported satisfactory performance of these fittings. The performance of insulated fittings of M/s Shree Bihari Ji Corporation has not be reported by Northern Railway. Other zonal railways should also sent joint performance to RDSO.
9. The trial need to be expedited to reach conclusions and take benefit out of it.
10. There is still problem of indent vetting in CR regarding funds and allocation. There is need to frame policy for trial. Railway Board ordered that trial should be charged to DRF/Revenue. One committee consisting of Railway Board

officials and RDSO official including Finance member exists for formulating uniform trial policy.

COMMITTEE'S RECOMMENDATIONS:

1. Trials should be expedited to arise at conclusions.
2. The trial of improved rail pad may be deferred due to non-availability of testing facilities in India. However, if railway can arrange for testing of pads from outside India, they can go ahead with trial.
3. Concerned zonal railway should send the performance report for the item Thermoplastic elastomeric pads and Insulated fittings for steel channel sleeper.
4. Concerned zonal railway should expedite the trial for the item Nylon chord reinforced GRSP, rail pad developed by M/s Rawatsons, Insulated metal liners developed by M/s Rawatsons and PSC sleepers for 25t.
5. Finalisation and issue of uniform trial policy being dealt by committee should be expedited.

S.No.33:

SUBJECT : Inspection and maintenance of points and crossings

(1161/80/ PTX)

COMMITTEE's OBSERVATIONS:

1. IRICEN/Pune is modifying the proforma for inspection of points & crossings. Accordingly Sr. Professor/IRICEN/Pune presented the revised proforma to the Members of TSC.
2. Members of TSC observed that the revised proforma should be circulated to all zonal railways for their comments first, then only it can be scrutinized in detail.
3. IRICEN/Pune should involve RDSO also for development of proforma.

COMMITTEE's RECOMMENDATIONS:

IRICEN/Pune should circulate the revised proforma to all Zonal Railways and RDSO for their comments. Zonal railways should send comments to IRICEN at the earliest after receiving the draft proforma for inspection of points & crossings.

S.No.34:

SUBJECT: Increase in top formation width

(1163/80/ GE/Gen/TSC/13)

COMMITTEE'S OBSERVATIONS:

Members discussed the issue afresh and have the opinion that the increase in formation width from two criteria below is based on purely technical reasons.

1. Increase in ballast cushion from 300mm to 350mm.
2. The side slope of ballast haunches/profile 1.5H :1V,

should be adopted keeping in view the ballast cushion of 350mm and stability requirement for lateral stability. The increase in the width based upon above both criteria will be one meter both in single line as well as in double line (in formation and cutting).

3. The increase in cess width from 1065 mm to 1200 mm can be dispensed with for time being as it will increase the cost of project as per the view of Railway Board.

COMMITTEE'S RECOMMENDATIONS:

Committee recommends that formation width be increased as under:

1. In Embankment – Single line 6.85 to 7.85 m
Double line 12.16 to 13.16m
2. In Cutting Single line 6.25 to 7.25m
Double line 11.55 to 12.55 m

S.No.35:

SUBJECT : Criteria for Deep Screening of ballast

(1166/80/ GE/Gen/TSC/13)

COMMITTEE's OBSERVATIONS:

1. The issue was discussed. RDSO apprised that no Rly. has given the requisite information to evaluating the criteria for deep screening though proforma was sent in Feb. 2010. However WCR mentioned that the same had been given by them to RDSO in Sept. 2010. Director/IRICEN also mentioned that some data available with Shri Manjul Mathur/Chief Engineer/S.Rly. can also be taken by RDSO. Director/IRICEN has also suggested RDSO should improve upon the proforma by incorporating maintenance effort put in the track between two deep screening.

COMMITTEE's RECOMMENDATIONS:

1. Committee recommends that RDSO should issue new proforma which include maintenance efforts put in by the Rly. in the track between two deep screening. The revised proforma should be issued to Rly. within one month i.e. Jan. 2011.
2. Contamination Index evolved by RDSO should be validated based on frequency of tamping between successive deep screening.

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S.No.36:

SUBJECT : Maintenance tolerance of gauge

(1168/80/ IRPWM)

COMMITTEE's OBSERVATIONS:

1. Draft correction slip to IRPWM submitted by RDSO is under consideration of Railway Board.

COMMITTEE's RECOMMENDATIONS:

- 1 Railway Board is requested to expedite approval and issue of correction slip to IRPWM.

S.No.37:

SUBJECT : Modification in F/S Turn Out (1 in 8.5 & 1.12) Drawings.

(1169/80/ PTX/Policy)

COMMITTEE's OBSERVATIONS:

1. The design of longer sleeper have been completed and drawing issued to N.C. Railway.
2. RDSO should issue the drawing to other Zonal Railway also.
3. The use of longer sleeper will improve the maintenance of Points and Crossing in regard to machine tamping.

COMMITTEE's RECOMMENDATIONS:

1. RDSO should issue drawings of longer sleeper for 1 in 8.5 fan shaped turnouts and 1 in 12 fan shaped turnouts to all other Zonal Railways.
2. Since the design of longer sleepers has been completed by RDSO and drawing issued to NCR, the item may be closed after issue of drawings to other Zonal Railways also.