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My dear Saxena, Srihari, Jha, Narayanan, Gupta, Dewangan,  
Kumar, Tiwari, Kumar, Narayanan, Kumar, Khare, Sangal,  
Diwate, Agarwal & Jain

**Sub: Mechanization of Track Maintenance and Renewal.**

Indian Railways are committed to complete mechanization of track maintenance and renewal. A number of machines have been procured towards this goal and further procurement is in progress. However, it is important that qualitative potential of available machines is fully utilized and these are optimally deployed.

2. In this regard, I would like you to pay particular attention to the following:

- i) Deployment - Priority in deployment of machines should be accorded to A, B & D special routes. From April 2010 onwards, deep screening and renewal on these routes (plain track as well as turnouts) should be carried out by machines only except few locations which are technically not amenable to renewal/deep screening with machines presently available. In case of such an exception, prior approval of AM(CE) should be obtained after due diligence by Principal Chief Engineer.
- ii) Track Relaying Train - Available track relaying trains should be deployed on A, B & D special routes. Instruction regarding opening TRT sites with 30 kmph should be complied with.
- iii) Ballast Cleaning - The new series of Ballast Cleaning Machines RM-80-92 U being procured since 2002 have the capability to deep screen turnouts also. However, only some of the railways are using this facility while others continue to do manual deep screening at turnouts. Henceforth, deep screening of all the turnouts falling on the way of aforesaid BCMs shall also be carried out by machine. Some of the Railways have resorted to using the machine for mere lifting of track which is an under utilization. The BCM should be deployed only for deep screening. Some of the BCM sites are

- still being opened to traffic at 20/30 kmph. Opening of all BCM sites should be planned at 40 kmph.
- iv) Shoulder Ballast Cleaning - SBCMs are not being adequately utilized which indicates lack of focus on these machines. Proper utilization of these machines will help improve drainage and hence maintainability of the track. The deployment and utilization of these machines should be monitored to achieve 5 years cycle. With the available machines, adherence to this cycle should be ensured for the A, B & D special routes. During operations of these machines, certain operators have tendency to reduce depth of screening for achieving more linear progress which defeats the purpose. Screening of the full shoulder section must be ensured.
  - v) Turnout renewal - Some of the Railways have been resorting to placement of only the switch by the machine and insertion of the remaining turnout manually. This practice should be stopped forthwith. The complete turnout should be assembled to proper quality at pre-decided assembly sites and replaced by machine in an assembled form. The trolleys provided with the machine should be used in carting of the assembled turnout.
  - vi) Turnout tamping - On several occasions, the turnout site is left untamped which must be tamped. The 3 S series of unimat have third rail lifting arm and the 4 S series of machine have spilt bank for tamping on turnout side. In several cases these facilities are not used leading to sub optimal utilization. Systems should be established to monitor and ensure the aforesaid aspects.
  - vii) Tamping in design mode- Tamping at worksites as well as during maintenance must be carried out in design mode to achieve best results of tamping. Varying percentage of design mode working are being reported by Railways which need verification in field with respect to correct understanding, pre-survey and application of design mode working. The aim should be to prolong tamping cycles by way of high quality achieved during each tamping.
  - viii) Dynamic Stabilization- A significant number of dynamic stabilization have been provided to the Railways. These should be effectively utilized for faster relaxation of speed restriction at worksites, particularly on A, B & D special routes. Synchronization of ballasting will, however, be crucial in achieving this goal. Use of DTS behind maintenance tamping should also help in longer retentivity of tamping.

3.0 I would expect you to take measures for planning and monitoring of the aforesaid aspects so as to ensure effective implementation. The field officers and staff should also be adequately guided and trained in this regard. Board's office would be sending staff from HUM Cell to conduct quality audit on various track machine sites. I would expect that each Zonal Headquarter also deputed officers and staff for quality audit on track machine sites to review and ensure that full potential of the track machines is being utilised and that machines are correctly deployed.

4. Action taken by you in this regard may please be apprised to me regularly through your PCDO.

With best wishes,

Yours sincerely,



(Rakesh Chopra)

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Principal Chief Engineer(s),

CR, ER, ECR, ECoR, NR, NCR, NER, NFR, NWR, SR, SCR, SER, SECR, SWR, WR & WCR.