

(16)

**Government of India  
Ministry of Railways  
Railway Board**

No. 2010/Track III/TK/01

New Delhi, dated 17-01-11.

**The General Manager (Const.)  
NF Railway, Maligaon, Guwahati.**

**CAO(C),  
All Indian Railways.**

**Sub: Mechanization of first two rounds of lining, leveling and packing  
of newly laid track at construction sites.**

1. Indian Railway Vision 2020 envisages that all the maintenance and construction activities related to track shall be mechanized. Mechanization of track works will help in improving speed of execution and quality of work. One of the important activities for construction of new track is its lining, leveling and tamping. As per the present practice first 2 rounds of lining, leveling and tamping are generally executed manually through contract whereas consequent 2 rounds are executed by heavy on-track machines namely Worksite Tampers. It has not been largely possible to execute first 2 rounds of packing by Worksite Tampers as connectivity of the newly laid track is not available in the initial stages.

2. Instructions regarding use of Small Track machines on constructions projects have been issued vide Board's letter No.2003/Track-III/TK/6 dated 18.07.03. These instructions provide for use of hand held off track tampers and portable track lifting and lining devices. However, these are equipments with low productivity and require significant manpower for large quantum at construction sites. These have not been extensively patronized in construction projects.

3. Small self propelled track machines are available for lining & leveling of track as well as for tamping. These machines are small enough to be transported by road by loading on trucks/trailers. As these are self propelled track machines, they have a reasonably good productivity which is considered suitable for first two rounds of tamping at construction sites. These are generally operated by a single operator. As these are small machines, these can also be procured/hired by contractors in case the size of contract is good enough to make it viable.

4. It is, therefore, advised that Railways may undertake pilot projects for mechanization of first two rounds of lining, lifting and tamping of newly laid track at construction sites through works contracts, using self propelled

off trackable machines, operated by 1-2 operator(s), suitable for working on broad gauge track as per IR standards, which can be conveniently transported by loading on trucks/trailers. The lining, leveling and tamping may be carried out either by a single machine or by combination of two self propelled machines.

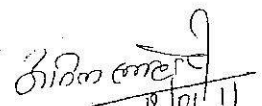
4.1 Railways may exercise a considered choice of operating the above item either with contractor's machine or with Railways' machine hired to contractor for the pilot projects. For the option of Railway's machine, Railways may provide for the cost of procurement of the machine in the project estimates and submit the vetted requirement to Railway Board for procurement.

4.2 As these machines are self propelled and off-trackable, proper safety precautions need to be taken. These machines should be operated by operators certified by Dy.CE(Construction), who shall issue competency certificate after examining the operator in respect of various instructions regarding safety for working on construction sites, particularly in respect of adjoining running lines. Further, such machines shall not be allowed to operate on the lines already open to traffic except under block protection.

4.3 The machines should be operated by operators trained by the manufacturer under supervision of a SSE/JE(P.Way) to ensure quality and safety at the worksite. After two rounds of such packing, the track should be fit for allowing traffic at a speed of at least 30 kmph. While efforts should be made that after two rounds of such packing, the track parameters as per stipulations of para 316 of IRPWM-1986 are attained, but in no case the track parameters obtained shall be inferior to those stipulated in Para 5.13(d) of IRTMM (Corr.Slip No.8) so that heavy on-track Worksite Tampers can be deployed for further tamping.

5. Action taken for pilot projects may please be apprised for Board's information. After gaining experience the system will be standardized and gradually extended to more contracts.

This issues with the approval of Board (ME).

  
(A.K. Lahoti)

Executive Director Track (MC)  
Railway Board

Copy to: i) Director, IRICEN, Pune for information.

ii) PCEs, All Indian Railways for information

iii) MDs, RVNL, KRCL, MRVC for information and necessary action.

iv) EDTM (M), RDSO for information