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Government of India  
Ministry of Railway  
(Railway Board)

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No.2011/Track-III/TK/4

Dated : 05.09.2018

Principal Chief Engineer,  
All Zonal Railways.

**Sub: Deep screening of loop lines with BCMs**

Indian Railways is planning to raise speed on loop lines to 50 kmph. It is desirable to maintain loop lines in all yards to the standards of main line providing adequate ballast cushion duly carrying out deep-screening with BCMs. SR has already started deep screening of loop lines with BCMs. A report from Palghat Division of SR for carrying out deep screening on platform lines with BCMs is enclosed for your ready reference and further necessary action.

It is advised that the Railway may take up deep screening of loop lines with BCMs and provide adequate ballast cushion for raising speed on loop lines to 50 kmph.

Encl: As above.

amr.  
06.09.2018  
(Ajit Pandit)

Additional Member (CE)  
Railway Board

am. 10/9/18

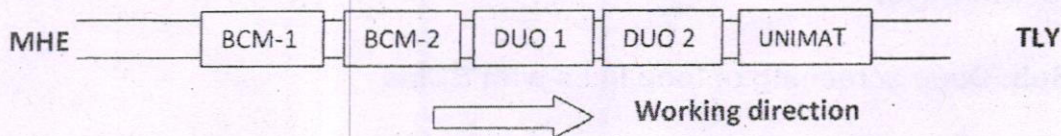
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## JAGANATHA TEMPLE GATE (JGE)

After the successful completion of deep screening work with BCM at Payyoli, Iringal and Mahe platforms our confidence increased, next task was deep screening of medium level (450mm) plat form at JGE Station. JGE station is a way side station with two roads UP and Dn main line of length 350m. A 2.5 degree curve starts from the middle of plat form. At the end of the plat form a busy level crossing also available. To avoid setting and removal of cutter bar within the plat form it is decided to do screening the entire length of plat form with one BCM. LC Gate and one bridge with plain track with other BCM. For this arrangement of machines were done as follows.



Preliminary works of removing obstructions and shoulder ballast were done with JCB before the BCM block. During BCM blocks both the BCMs kept away from the work spot towards MHE side and all the three packing machines slewed the track away from plat form to required distance and cleared the block section. BCM machines started work from their programmed locations. BCM 1 lost some working time due to repair at the starting itself and due to entangling of old RCC slabs and hectometer post in the middle of the work. Mean time all the three packing machines entered into rear portion through MHE side and started slewing back the track to its original location. Since there was no separate machine for packing the screened location by BCM-2, its progress restricted to 150m including LC gate and a minor bridge. The work completed with 4.5hrs with a time loss around 45mins.

The work done and cooperation from other departments especially from OHE, traffic and track machine staffs played a vital role in successful completion of these works.

*v. Rajagopal*  
Sr.DEN/Co-ord/PGT

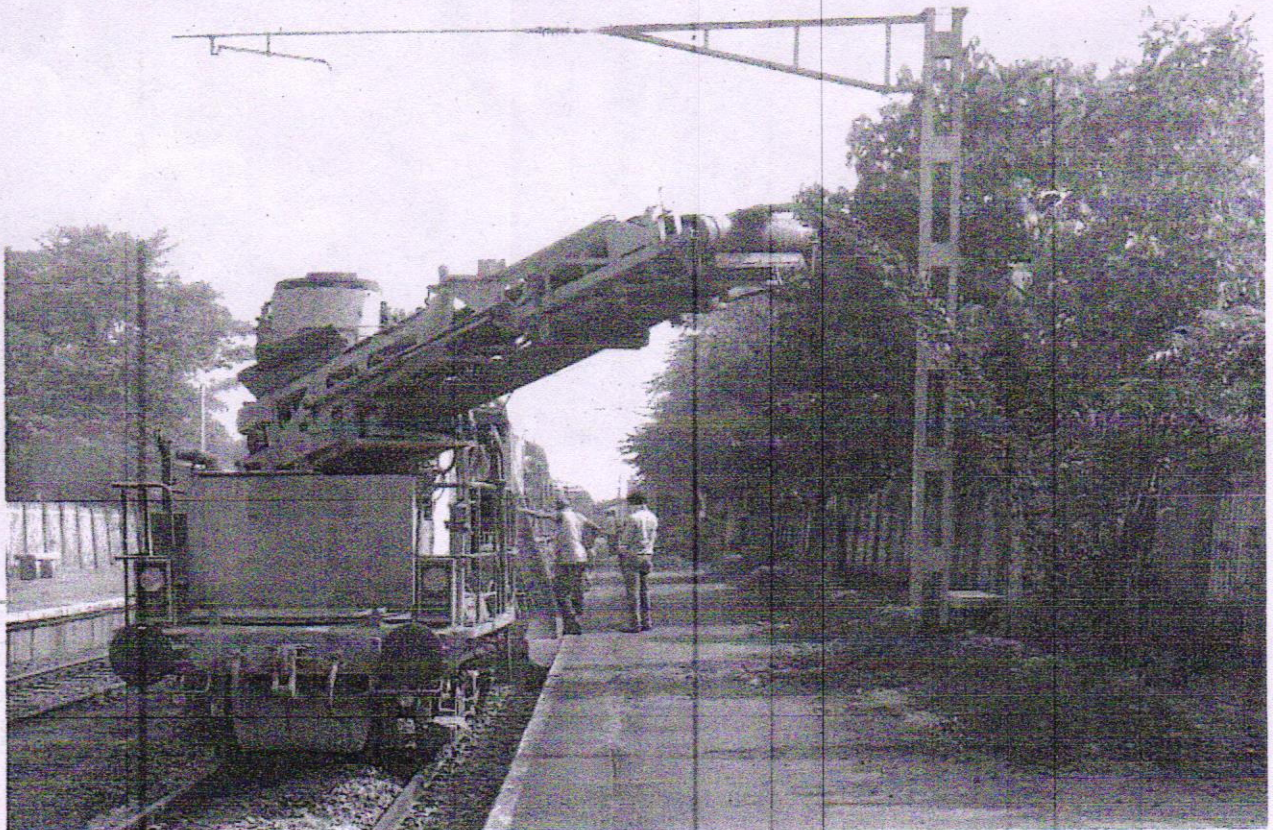


## Special Report on Deep Screening of PF Lines In PGT DIVISION

### **General**

Platforms-tracks in QLD section were not screened during last round of screening and no agency was ready to take up this due to less quantity and non-availability of screening labour. Hence, this time programmed it to do with BCM. As a trial, first we programmed to screen PYOL platform.

### **PAYYOLI (PYOL)**

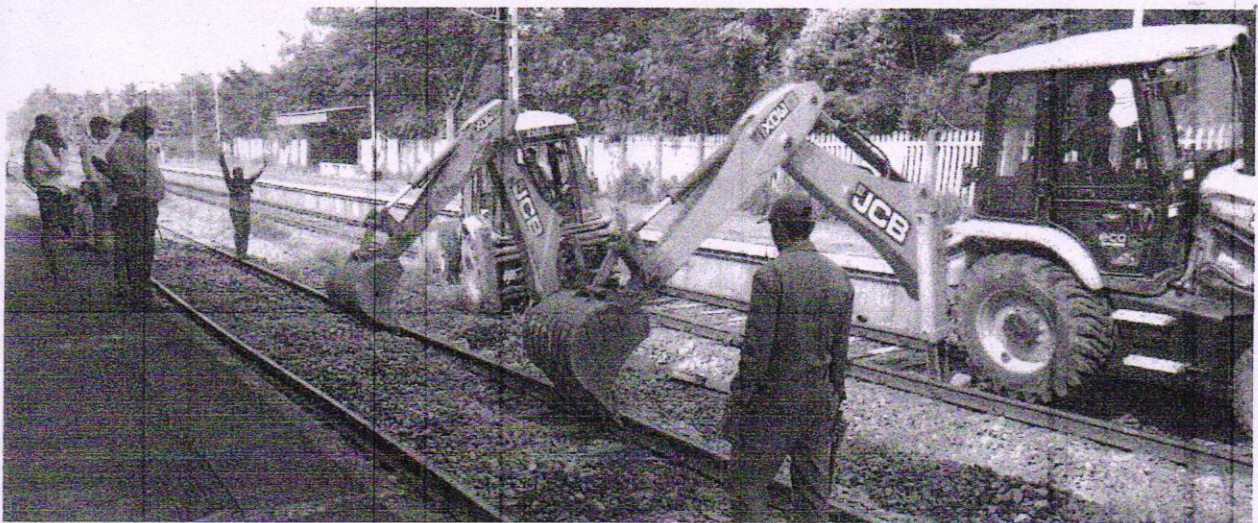


Payyoli is a wayside station with two lines and high level platform having 270m length on both lines. Both end of platform has level crossings. Available machines at the time of planning were two BCMs, Two DUOMATIC, one UNIMAT and one DGS. A JCB also hired for preliminary works of LC gate screening.

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The clearance available between sleeper end and platform wall is 300 less than the required clearance. For passing the cutter bar track has to slew 300mm away from plate form and slew back after screening for permitting AC powered trains and to avoid passengers falling inside. 150mm of Slewing of track planned using UNIMAT and balance with screening BCM. Preliminary works like removing Infringing "A" bases of Signal department at LC gate, soling stones in LC gate area, Water pipes electrical and telecommunication cables, RE bonds, Trolley paths, and platform struts completed by around 10.45hrs. Inserting and removing of cutter bar requires more clearances than working, hence it was planned to do screening of entire length of platform with one BCM, so that setting in and removing avoided inside the plate form. Some coping slabs at the start also removed but it was not required.



At that time SSE/UNIMAT informed that Unimat couldn't work on that day since a major crack noticed in bogie frame. As the work could not be canceled after completing all preliminary works, hired one more JCB to Slew the track for working of BCM. Ballast at shoulders first loosened using JCB and pulled for getting required slew. During working, the ballast was so regulated that less ballast will fall on platform side. This is to reduce the resistance while slewing back to original position. Slewing back after work was reprogrammed with second BCM, which was in rear after doing LC portion. Lifting unit roller of this BCM failed after slewing the track for 170mts. Hence further slewing done with JCB and DUOMATIC machines. DUOMATIC can slew only half distance that can be done with UNIMAT. For working of JCBs other line also obstructed hence continuous working of JCB could not be done platform on other line also made hindrance for JCB working. The first train is with AC engine, hence block cancelled after slewing back the track to safety limits. BCM work started at 12.50 Hrs and completed at 14.50 hrs. After slewing back and packing, work completed at 16.45Hrs. With all unexpected obstacles, we completed the work.

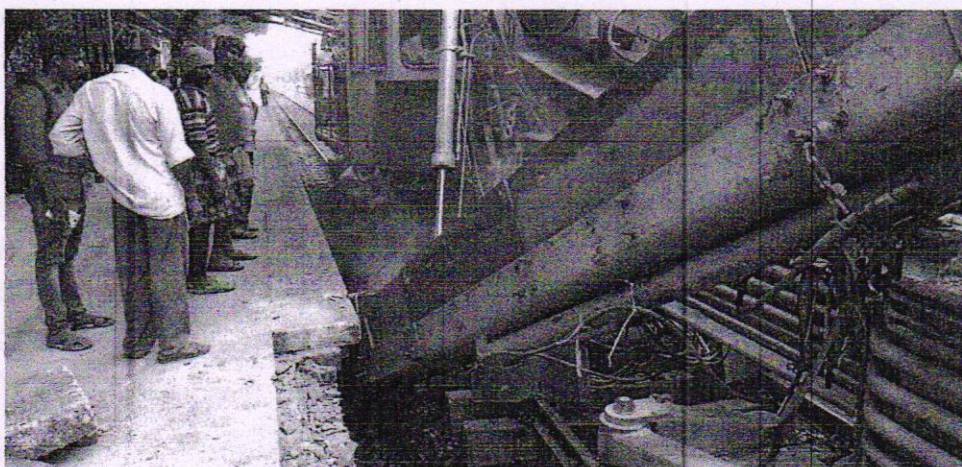


## **IRINGAL (IGL)**



Iringal also is a wayside station with two lines and rail level platforms. These platforms were proposed for rising to high level platforms. This PF was made by providing a vertical slab in place of wall paved with slabs. For deep screening, the vertical slab and one row of paved slabs removed and after screening these slabs were replaced. Problem during the work was, there were two rows of slabs were available at most of the location with RCC slab size 90cmx90cm. One row was very old that also removed by JCB and work completed. The length of PF is 380mts

## **MAHE (MHE)**

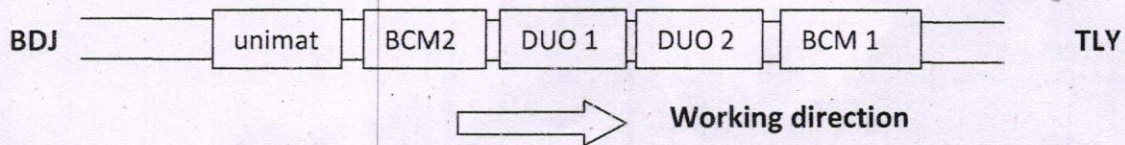


Mahe is a three road station where Platform lines are mainline and common loop in the center. Station room is in this platform. To avoid dust and muck come into office, a partition

made with tarpaulin in the middle of platform along pillars of platform. Length of platform is around 600m and hence one BCM cannot complete it in one run. Hence,



work programmed with two BCM. This made us to start one machine from the middle point and stop at one end and other machine to start from other edge and reach till middle point. For setting and removing cutter bar additional clearance more than working clearance is required. This is minimum 1.1 mts. For providing this clearance other than track, slewing two sleepers removed so that the cutter bar arm can work freely.



Machines available on that day were One UNIMAT, two DUOMATIC and two BCMs. Since the work to be started from next sleeper of longest sleeper (83<sup>rd</sup>) grouping of machines were done as shown. Machines to enter from TLJ end. First UNIMAT and BCM- 2 gone to point no. 50 B. Two JCBs slewed the track for working of this BCM. Other two DUOMATIC entered in to platform slewing the track, but with first run, the slew was not sufficient. With second run required slew reached and BCM 1 came to its starting location. Before arrival two sleepers removed and two coping slab also removed for

facilitating seeing of cutter bar all these took some extra time than planned. Screened muck fallen on to platform were cleaned simultaneously using one JCB and contractor labour.

Care was taken to regulate ballast falling to PF wall side for easy slew back the track to original position. Second BCM completed its work first and the UNIMAT slewed back the track in two runs. The other BCM took extra time due to some obstructions and late start. The slewing back work could not able to complete with two DUOMATICS in one run hence BCM was shunted out off group and UNIMAT started the work of slewing. In middle of work, UNIMAT engine heated up and stopped for some time for cooling. The work took around six hours hence trains dealt through loop line.