

# **Modeling an Optimal Track Maintenance Schedule in Consideration of the Timing of Grinding and Tamping**

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Recently tamping machines have been used for the maintenance of ballasted tracks, and rail grinding machines are used for the removal of rail surface irregularity. Though the maintenance cycle could be extended and the amount of the total maintenance cost could be decreased by efficiently combining both, usually both machines are independently operated. Therefore, in order to easily find a suitable maintenance schedule including both the tamping and grinding, we built a model for estimating the effect of the combined maintenance, and developed a scheduling system. By test computation, we have confirmed that our model is effective in terms of maintenance quality. Moreover, we investigated the optimum amount of the combined maintenance.