Modeling an Optimal Track Maintenance Schedule in Consideration of Train Derailment Accident Risk

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Through appropriate maintenance work, railway track irregularities must be kept at a satisfactory level in terms of train derailment accident risk. Therefore, we have developed an optimal decision making model for tamping work schedules in accordance with the magnitude of the risk. In order to determine the schedule, the model was developed based on the result of statistical model analyses in consideration of the influence of the accident and the probability of the accidents caused by track irregularities. Using the model, we can obtain an optimal track maintenance schedule in consideration of the risk.