Development of Automatic Calculation Method for Maintenance Worker Scheduling Using Tabu Search

Tatsuya KOKUBO Satoshi KATO Taichi NAKAHIGASHI

Maintenance worker scheduling is a daily schedule for each worker group to perform inspection and maintenance work such as cleaning of rolling stock during a turnaround operation of a superior trains at a terminal station. Since it varies from day to day according to changes in daily train timetables and rolling stock operations, it is required to be created for each day. We have proposed a method for automatic creation of maintenance worker schedules with tabu search, one of meta-heuristics. In this paper, to confirm the effectiveness of the proposed method, we compared an actual schedule with schedules by proposed method. The results indicated that the proposed method could generate a stable solution within a practical computation time of 3 minutes, regardless of the size of the train schedule.