Design Method for Ballasted Track Applicable to Widening of Sleeper Spacing

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A design method for ballasted track, which is applicable to the case of widening sleeper spacing, considering the condition of ballast and track bed and the quality of maintenance, was proposed. The method was considered to be a complement to the conventional design method, defined in the Railway Structure Design Standard – Track Structure. On the basis of the proposed method, we conducted the simulation of train running on the condition of various curve radii, and clarified the limit sleeper spacing which secures running safety. Moreover, we conducted a trial calculation regarding the propriety of widening of sleeper spacing using the method.