An Effect of Automatically Irregularity Correcting Sleepers on Maintaining Track Level around Conversion Part between Different Track Structures

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At locations between ballastless track and ballast track, it is a common knowledge that track irregularity becomes locally discontinuous; therefore loosen sleepers are likely to occur. As a countermeasure for the local track-irregularity, the authors developed the track structure, which adopted the automatically irregularity correcting sleepers as termed AICS. Since the AICS is a sleeper, which itself adds to its height automatically even if ballast deforms, rail subsidence is accordingly preventable. In this paper, the authors performed the moving load tests with 1/5 scale track models, and thereby grasped the relationship between the number of the AICS and the restraint effects of the track irregularity. In addition, the authors clarified the track-irregularity restraint mechanism for the track structure, which adopted the AICS.