

Evaluation of Durability of Vibration Isolation Materials and Vibration Characteristics of Track Structure in Floating Track with Under Sleeper Pads

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Although a floating track with coil-spring units has excellent effects in reducing ground vibration, some cases have been reported in which rail corrugation occurs not only on the low rail but also on the high rail in some sharp curve sections. Therefore, we developed a floating track with under sleeper pads in order to reduce the occurrence of rail corrugation on high rails and the construction costs of the floating track with coil-spring units. In this paper, the fatigue durability and other properties of the vibration isolation materials (foamed EPDM and urethane) were evaluated, as well as the vibration characteristics of the track when a motorcar runs on the full-scale track.