

## **Evaluation Method of Growth Process of Rail Corrugation by Monitoring Rail Vertical Vibration**

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Rail corrugations cause noise, vibrations and deterioration of track components, which increase the frequency of track maintenance work. However, a measurement method that efficiently evaluates the growth of rail corrugation has not been established. The authors of this paper have developed a monitoring system for rail corrugations that enables long-term remote measurement of rail vibrations by means of battery-powered accelerometers and a wireless sensor network. In this study, the relationship between rail vertical vibration characteristics and actual rail corrugations measured on business line was investigated to verify the applicability of the developed system for identifying the growth process of rail corrugations.