

Development of Grouted Ballasted Track for Existing Shinkansen Asphalt Roadbed

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One way to reduce maintenance costs for ballasted track is to replace existing lines with grouted ballasted track. When forming the grouted ballasted track, the voids in the ballast bed are filled with a cement-based grout material to create what is known as a pre-packed concrete bed. In this study, we proposed a design method for laying a grouted ballasted track on an existing 40-year-old asphalt roadbed and confirmed that the safety requirements regarding the destruction and fatigue failure of asphalt roadbeds and pre-packed concrete beds were satisfied.