

## **Development on Tunnel Soundness Diagnosis System**

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Generally, railway tunnels are maintained based on overall inspections and individual one. In this study, we developed the diagnostic system of tunnel soundness using the result of the inspection data, such as crack information, progress of tunnel deformation and topographical and geological conditions. This system automatically diagnoses the tunnel soundness, presumes the cause of tunnel deformation, and selects the appropriate countermeasures. Thus, it enables us to minimize the differences of inspection results among individuals.