

## **Development of Remote Noncontact Evaluation Method of Railway Bridge Soundness**

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In order to improve the method of soundness inspection of railway bridges, remote noncontact inspection techniques using LDV and UAV were developed by RTRI. Firstly, we developed a long-distance type LDV endowed with auto-collimation function and applied it to the cable inspection of a long-span cable-stayed bridge. Secondly, UAVs were developed that perform hammering tests or rebar explorations while running beneath the underside of bridge girder using crawlers. Furthermore, by applying the developed UAV and LDV, we proposed a noncontact measurement method of the elastic wave velocity that is related to the RC members' strength and rigidity.