

**Renewal of Existing Railway Steel Bridges
by Structural Improvement Composing with Concrete Slabs**

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More than a half of existing railway steel bridges in Japan have been in service for more than sixty years. Some of the aged bridges have various severe problems including corrosion, fatigue and noise. In this study, we proposed a method of structural improvement of the existing railway steel bridges by composing with concrete slabs. Using this method, we can improve the load-carrying capacity of the bridges, extend the service life, and reduce the noise. We carried out a series of fundamental studies to verify the adaptability of the proposed method.

Finally, we proposed a method of composition, which applicable in a tight time schedule, and found by loading tests that the girder-slab connection has adequate strength for composition of existing girders.