

**Development of the Reinforcement Method for the Beams of Existing
RC Rigid-Frame Viaducts Using Arch Shaped Steel Plates**

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Many existing RC rigid-frame viaducts in urban areas were constructed a long time ago, and extensive repair work may be necessary not only for columns, but also for beams due to insufficient of durability and seismic capacity. Therefore, we developed the reinforcement method for reinforcing the beams using arch shaped steel plates. Such reinforcement improves structures where flexural capacity and shear capacity are insufficient. In relation to this, we investigated the effects of reinforcement using bending reinforcing bars, shear reinforcing bars and arch shaped steel plates in loading test, and proposed a design method.