

## **Proposal of a Railway Viaduct with “Super-continuous” Foundation and Its Behavior During Earthquakes**

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Railway structures are constructed linearly and continuously on the surface ground of which sedimentary structure in many cases varies greatly from site to site. As a result, the site-specific structural design is required and the cost for design and construction increases. In addition, angular bents and joint staggers at the boundaries between adjoining structures are generated, which adversely affects the train running safety during earthquakes. Therefore, we proposed a railway viaduct with “super-continuous” foundation, which is constructed by combining a series of foundations of multiple viaducts in the section from 100m to 1000m. The foundations thus combined move together during earthquakes, so it is expected that the variation of effective input motions to the structures becomes small. In this paper, it is verified by 3-dimensional dynamic analysis of the proposed viaduct that the variation of effective input motions becomes small and that the running safety of train is improved.