

**Improvement in Evaluation Method of Lateral Stability of Turnout  
Connected with Continuous Welded Rail**

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The installation of turnouts connected with continuous welded rail (CWR) is recommended for reduction in the amount of track maintenance and improvement in riding quality. However, requirements for the installation are not examined enough from the viewpoint of lateral stability and the installation is limited under specific conditions. This study improved the traditional method for evaluating the lateral stability of turnouts connected with CWRs and examined requirements for the installation by use of the method. As a result, firstly, lateral resistances of ballast required to ensure the lateral stability were estimated under several conditions of CWR tracks where two turnouts exist. Secondary, the requirements for the installation were made clear with regard to CWR tracks where symmetrical, asymmetrical and curved turnouts exist. Finally, a long term site test of turnouts on a ballastless track of viaducts was carried out and characteristics of the rail axial force, the longitudinal rail displacement and the viaduct expansion caused by temperature fluctuations were made clear.