Dynamic Behavior of Ballasted Track at Earthquake

Kiyoshi ASANUMA Etsuo SEKINE Hiroo KATAOKA Masamichi SOGABE Keiichi GOTO Munemasa TOKUNAGA

A number of researches have been implemented on the safety of ballasted track to minimize the degree of damages by earthquake. Nevertheless, sufficient knowledge has not been obtained yet on the dynamic behaviors of ballasted track itself. Against the above background, firstly the authors carried out a static analysis in order to evaluate stability against track buckling of straight track of continuous welded rails. Secondarily the authors carried out a dynamic analysis about ballasted track on ground and on structure during earthquake, using parameters of lateral peak resistance of ballast, degree of earthquake, etc., and examined the dynamic behavior of ballasted track during earthquake.