

Design Method for Over Track Buildings with Steel Pipe Pile Groups

Katsuyuki SHIMIZU Seiji YAMADA Hidetoshi NISHIOKA

Keiichi TAKADA Masatoshi WADA Shinji KISHIDA

The pile constructions of over-track buildings, which often result in large-diameter piles, have many restrictions, because it has cast-in-place concrete piles without footing beams. There is a way to replace a large-diameter pile with a pile group of small-diameter steel pipe. In this report, static axial couple load tests of the screwed steel piles and cyclic bending shear load tests on the reinforced concrete joints between a steel pipe pile group and the column are conducted to obtain the effect of the pile group on vertical resistance at the pile tip and the mechanical properties of the reinforced concrete joint. A structural design method of over-track buildings with steel pipe pile groups is proposed based on the experimental test results.