Evaluation of Bending Capacity and Ductility of Concrete-Filled Circular Steel Tube Members Using High-strength Materials

Masamichi SAITO Manabu IKEDA Yoshihisa BANDAI Naoto YOSHIDA

There is a large demand for reducing cross section of concrete-filled steel tube (CFT) members because they are often applied to places with space limitation. Although the use of high strength materials is effective in minimizing the cross section, the existing design method is not applicable to high strength materials. In this study, loading tests of CFT members using high strength materials were carried out to obtain their bending capacity and ductility. As a result, it was found out that a new design method is applicable to those members. Considering the obtained behavior, damage level limits of CFT using high strength materials were discussed.