



GFRP约束再生混凝土轴压试验

On recycled concrete confined by GFRP tube under axial c

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中文摘要

主要以再生粗集料取代率为试验研究参数,完成了9个GFRP约束再生混凝土圆柱试件的轴压试验,重点分析了试件的受压破坏再生混凝土的横向变形系数变化规律。试验和分析结果表明:GFRP约束再生混凝土纵向应力应变关系呈弹性上升、弹塑性上升、下降到改善,核心再生混凝土和GFRP管之间滑移较小,含再生粗集料试件的横向变形系数普遍低于不含再生粗集料的试件。

英文摘要

Based on tests on 9 recycled concrete specimens confined by GFRP tube with different recycled coarse aggregate compression, the research investigates on the failure properties under compression, axial force-longitudinal displacement and variation rule of lateral deformation ratio of the test specimens. It is found that the stress-strain relationship divided into four branches, i.e., the elastic ascending branch, the elastoplastic ascending branch, the descending branch and strength and deformation ability of confined recycled concrete are obviously improved than those of unconfined recycled concrete and the GFRP tube is negligible, and the lateral to longitudinal deformation coefficient of specimens those without recycled aggregates.