

# An Overview of Research at HKU on HSRC Columns and Beam-Column Joints for Low-Medium Seismic-Risked Regions

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## ABSTRACT

*Up to now building structures in Hong Kong (HK) are not required to resist earthquake effects. The design is based primarily on strength without taking into account any ductility consideration. Therefore, the resulting structures would have unpredictable inelastic performance when subject to overloading, a sudden impact or an earthquake attack. The situation is even worse if the structural members are of high-strength reinforced concrete (HSRC), which is becoming more popular in HK. To improve the post-elastic design of reinforced concrete (RC) members, a continued research study consisting of experimental tests has been conducted at The University of Hong Kong (HKU) since 2000, which covered among others tests on HSRC columns and internal RC beam-column joints. This paper reviews these research studies that focused on the strength, ductility and reinforcement detailing of columns and internal beam-columns joints. The test results showed that HSRC columns and beam-column joints designed according to the authors' proposals behaved in a limited ductile manner, which is suitable for low-medium seismic-risked regions where HK is located.*

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