

Summary of Decisions of the Structural Engineering Committee
SEC 8/2009 held on 19.08.2009

(a) Case 8/2009

Issue: Use of mechanical coupler as equivalence of full strength welded splices

Recommendation: To accept mechanical coupler be used in any location to facilitate the fixing of reinforcement bars as per full strength welded splices without being subject to the restrictions for laps and mechanical couplers stipulated in clauses 9.9.1.1(d) and 9.9.2.1(d) of the Code of Practice for Structural Use of Concrete 2004 (the 2004 Code) on the following conditions:

1. The couplers shall be tested in accordance with US standard AC 133 “Acceptance Criteria for Mechanical Connectors for Steel Bar Reinforcement” in local HOKLAS accredited laboratories (or overseas laboratories accredited by other accreditation bodies which have reached mutual recognition agreements with HOKLAS) to establish that the couplers comply with the requirements of Type 2 mechanical splices as specified in US Standard ACI-318 “Building Code Requirements for Structural Concrete”;
2. The couplers shall also be tested in local HOKLAS accredited laboratories to establish that the couplers comply with the requirements stated in Clause 3.2.8.2 of the 2004 Code and the criteria that the tensile strength of the coupled bar assembly should exceed 287.5 N/mm^2 for grade 250 and 529 N/mm^2 for grade 460; and
3. Full test reports and quality assurance schemes from manufacturer and purchaser shall be submitted for BD’s acceptance.

Decision: Having noted the acceptance criteria proposed by the RSE for testing of the mechanical connector, Members considered that further liaison with RSE regarding the testing regime should be conducted to obtain more information for consideration by the SEC. The case was withdrawn by RSE.