# Effect of CFRP plate length strengthening continuous steel beam

Abstract

This paper focused on behavior of beam strengthened with CFRP plate and effect of strengthening length. The simply supported steel beam tested in previous work was modeled using ANSYS finite element software, the same parameters as the experimental data were used to model the steel beam in FEA. Characteristic points on the load-deflection response curve predicted using finite element analysis (FEA) were compared to experimental data. The comparison shows that the ANSYS finite element program is capable of modeling and predicting the actual deformation behavior for steel beam. The FE model simulated in this study used to build continuous steel beam and strengthening it by using different length of CFRP plate as a ratio of beam length. The FE analysis result shows that the length of CFRP plate when reach (40% and 60%) of span length and total beam length in sagging and hogging regions respectively, the increased of ultimate strength of beam become growth slowly.