

## **Three Dimensional Simulation of the Shear Property of Steel-concrete Composite Beams with an Interface-slip Model**

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### **Summary**

A three-dimensional finite-element (FE) analytical approach for the simulation of Shear property of steel-concrete composite beam is presents in this paper. To simulate the interfacial behavior between the steel girders and concrete slabs, an interface-slip model which has been better used in analyzing the flexural property of composite beams is applied in the simulation. Both simple-supported beam experiment at positive bending zone and negative bending moment zone in literatures are simulated respectively. The load-deflection and the slip rule between the steel girders and concrete slabs as well as the crack pattern and the contour at the ultimate load are analyzed. The results obtained from the FE analyzes match well with the corresponding experimental results. The FE analysis method is verified to be capable of simulating the shear property of steel-concrete composite beams.

