

Comparative Study on Different Type of Shear Connectors in Composite Slabs

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Abstract : In modern construction industry, usage of cold form composite slab has its scope widely due to its light weight, high structural properties and economic factor. To enhance the structural integrity, mechanical interlocking or frictional interlocking was introduced. The role of mechanical interlocking or frictional interlocking is to increase the longitudinal shear between the profiled sheet and concrete. This paper deals with the experimental evaluation of three types of mechanical interlocking devices namely normal stud shear connector, J-Type shear connector, U-Type shear connector. An attempt was made to evolve the shear connector which can be suitable for the composite slab as an interlocking device. Totally six number of composite slabs have been experimented with three types of shear connectors and comparison study is made. The outcome was compared with numerical model was created by ABAQUS software and analyzed for comparative purpose. The result was U-Type shear connector provided better performance and resistance.

Keywords : composite slabs, shear connector, end slip, longitudinal shear

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