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Original Scientific Paper

COMPOSITE TRUSS BEAMS BEHAVIOUR

Summary: *The design specifications of composite trusses are only partially included in the European standards. However this construction system can be considered as one of the most economical for building and bridge structures. In general, the composite trusses can be used for greater spans up to the 30 m, which allows better use of internal space without restricting columns. To create the interaction between steel and concrete, it is necessary to prevent the relative slip at the steel and concrete interface using the shear connectors. But the local effects of a concentrated longitudinal force and the distribution of the shear force between steel section and concrete slab, as special task, should be appropriately examined. The finite element analyses can be used to investigate numerically this structural system. But also the static, dynamic and nondestructive experimental research has examined real structural behaviour. The outputs of this study are presented in the paper.*

Key words: *Composite truss, shear connection, numerical and experimental study*

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