Abstract

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Design and Construction of Multitier Shoring Towers

The construction of heavy and high concrete slabs is consider as a great problem in projects because they need very efficient formwork systems. The multi-tiers shoring towers (as vertical supporting members) appears as the common solution for this problem in addition to plywood sheathing, steel, wood ,aluminum as joists, stringers as secondary and main beams . The multi-tiers shoring towers are made of painted steel, galvanized steel aluminum, they are modular, can be used a large number of time, much faster to erect and have high loading capacity. According to increase in demand for this type, the reason to study them is extremely needed. This paper determines the minimum weight of slab formwork using this system . The genetic algorithms is used as an optimization technique . An examples is provided to illustrated the design procedure. The design procedure is shown through a computer model called OSAF.