

EFFECTS OF STRONG COLUMN WEAK BEAM RATIO AS CONSTRAINT FOR STEEL FRAME OPTIMIZATION

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ABSTRACT

An approach is presented as usage of genetic algorithm (GA) concept for steel frame optimization. The purpose of this paper is to discuss differences between result of optimization with and without strong column weak beam concept for optimizing steel frame structure. The optimization processes are carried out through 660 members of 2D steel structure model using GA-SAP2000. It is concluded that strong column weak beam constraint gives much different structural behavior.

Keywords: Genetic algorithm, Optimization, Steel structure, SAP2000, Strong column weak beam.