

عنوان مقاله:

Design and optimization of steel frames using genetic algorithm

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خلاصه مقاله:

optimization of structures to achieve the minimum weight has become very important in recent years. In this paper, the genetic algorithm is an optimization and search technique based on the principles of genetics and natural selection. The genetic algorithm is one of the most popular method among researchers which received considerable attention in last decades. So, we are going to minimize the weight of steel frames using this effective method. constraints on resistance and serviceability are taken from the American Institute of Steel Construction (AISC). The design process of frame with minimum-weight and bracing pattern is selecting a suitable section for beams, columns, and members from The bracket which provides a standard set of sections. The results of this study indicate that .optimizing based on minimizing weight can also improve both performance and accuracy of structures

کلمات کلیدی:

Genetic algorithm, Meta-heuristic, Size optimization, Steel frame

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