

Economic proportioning of continuous steel I - beam

Shukri Hasan Al-Senan

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Abstract

A computerized method based on elastic analysis is presented to find economical proportioning of continuous built up steel I-beam or girders subjected to uniformly distributed load. The optimum locations of predetermined number of cut-off points for flange plates are ascertained which lead to the minimum weight design of the beam. The beam, symmetrical in cross-section, has an unchanged web of constant height. The proposed method is applied to solve various continuous example beams to demonstrate the general applicability of the program.