

OPTIMIZATION OF BUILT-UP NONUNIFORM STEEL I-BEAMS.

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Abstract: In this paper, the results of only symmetrical two and three-span continuous beams subject to uniformly distributed loading are presented. The beam is assumed to be unstiffened and symmetrical in cross section with identical top and bottom flange areas. In seeking optimum web shape, a parabolic variation in depth has been considered. The plastic design method of the AISC Specification has been followed to comply with the design requirements. It is further assumed that the beam has adequate lateral supports to prevent premature lateral buckling prior to the attainment of full plastic moment.