

ECONOMIC DESIGN OF HOMOGENEOUS I-BEAMS

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Abstract: A procedure to find an economical design of homogeneous I-beams following the AISC (1973) specification has been presented considering the limitations imposed by the available plate thicknesses. Both stiffened and unstiffened beams are considered. A method is presented to find the flange plate cut-off points for the minimum weight design. Design charts are provided to readily find economical dimensions of an I-beam. Examples are given to illustrate the procedure.