

OPTIMIZATION OF Laterally UNSUPPORTED UNSTIFFENED STEEL I-BEAMS.

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Abstract: A procedure to find the optimum proportioning of laterally unsupported homogeneous I-beams following the limit state design method is presented. Both bending moment and shear force is considered in the optimization procedure. The web is unstiffened and the proportioning is restricted to Class 1, 2, and 3 type sections. Some design charts covering a large range of values of unsupported lengths of compression flange and design moments are provided.