

# BEHAVIOR OF PERFORATED COLD-FORMED STEEL SECTIONS WITH TRAPEZOIDAL WEB STIFFENERS

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## **Abstract:**

Experimental studies is performed to examine the strength and behavior of perforated cold-formed steel sections with edge and web stiffeners subjected to compression loading. Axially compression load was imposed on fix ended short columns with various perforation series. There are total of 16 specimens was conducted as to observe possibility interaction between them essentially the stability capacity, buck-ling mode and behaviour. The results showed that the ultimate load of the cold-formed steel sections with edge and web stiffeners under compression varied significantly with the perforation position. Under the same condition, the ultimate load-carrying capacity of  $\Sigma$ -section members and conventional Csection members was increased by 10-20 %. The ultimate strength graphs are drawn as well as the failure modes are discussed for different cross-sections and perforations positions.

**Keywords:** Cold-Formed Steel; Column; Stiffeners; Perforation; Bucklingce

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