

## THE PRELIMINARY UNIAXIAL COMPRESSION BEHAVIOR OF CORRUGATED COLD FORMED STEEL MEMBERS

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### Abstract

The modern basic civil engineering concept is to design simplistic structures, by using innovative brand new manufacturing and assemblage concepts. As a result of this concept, arch type steel plates are used like the corrugated coatings. The main purpose of this work is to describe the Roll Form Machine (RFM) technology as used for the structures, especially for the roofs. Cold formed arch type steel structures may be fast and simple. These types of structures were used for temporary buildings in the US Army. Nowadays, this technology becomes popular and gets in consideration for civil life. However, the design concept of this technology does not have a theoretical model, and the calculations are evaluated according to the United States Standards. The uniaxial compressive behaviors of corrugated arch type steel members are observed, experimentally within this work.

**Keywords:** Cold formed steel; Corrugated arch; Shell type steel section; Uniaxial load.