ROLLFORMING – Strut Channels

A S Shetty

In this Twenty second series of articles on Rollforming we will discuss about the most versatile type of Rollformed Sections, i.e Strut Channels which are extensively used in different areas in the advanced countries.

Of late, they are also slowly getting popular in India. They are being extensively used in " Flexible Support Systems", Metal Framing Systems, Electrical Installations, Space Frames, Cable Supporting Systems, Racking Systems, Display Booths, Shelters and in constantly ever increasing field of activities in the advanced countries. In the US alone there are dozens of companies exclusively producing the above mentioned systems.

These metal framing support systems are designed with many time-saving features. They are fully adjustable, reusable and consist of a complete line of Rollformed Channels, fittings and accessories for multi-purpose activities.

These systems require no welding, no drilling and ones imagination decides the various possibilities and combinations. These framing systems can be installed quickly and there is no need for special tools. All that is required is a wrench and hack-saw. Channels and parts can be taken apart for reuse as quickly as they were assembled yet they provide the strength of welded construction. Eliminating welding and drilling produces substantial savings in time and labour.

These metal framing systems provide an economical solution for electrical, mechanical and industrial supports with an unlimited variety of applications in the construction industry. The various Metal Framing Electrical applications are- Lighting fixture supports, Raceway systems, Trapeze Hangers, Pipe & Conduit Supports, Cable Tray Supports etc.

The Metal framing Mechanical applications are Piping Racks, Tunnel Pipe Stanchions, Concrete Inserts, Beam Attachments etc. Metal Framing industrial applications are- Racks and Shelving, Partitions, Production Line Supports, Trolley systems and Wall Framing.

Although these strut sections are simple sections compared to many other intricate rollformed sections because of the double lipped C Channel shape they have a high strength to weight ratio in the plane of bending.

By joining them back to back or arranging them in the combinations shown various structural possibilities exist. By providing clamping fixtures which could be movable along the length of the sections varieties of useful structural systems could be provided. The rigid lips could be used as track for trolley systems.

Finishes and Base Metals: They could be supplied as Zinc Electro-Plated, unfinished HRPO, Painted Polyurethane, Powder-coated to different colours, Hot dip galvanised, in Stainless Steel and other custom finishes and metals. They could also be supplied with different shaped perforations and punchings.

Normally they are supplied in 12, 14 and 16 Gauge thicknesses and 3 and 6 Mtr lengths.

The tolerance on lengths would be + 3 mm. Channel combinations of two or more elements are produced using both a new and exclusive "Toggle Lock" operation which mechanically joins them together and traditional welding methods like spot welding or MIG welding where spotwelding is not possible.

The spot welds are spaced around 80 mm on centers throughout the length of the multiple channel sections. The figure1 to Fig.9 shows some of the typical welding combinations available.

The channels are made avaialable as a solid section or perforated (oblong or round hole patterns) along the spine. The fittings developed enable the user to accomplish the following:

Join Channels to form structures, mount various products to channels, Mount channels onto other manufacturers' products. Anchor channel and associated components to walls, floors, ceilings etc.

These strut systems could be used as a simple beam (e.g a cable tray or conduit trapeze hanger), fixed beam (e.g bolted to rigid supports), cantilever beam (e.g. shelf brackets), continuous beam (e.g. lighting installations)or columns (e.g. vertical members in a storage rack)

From the above mentioned information one could very well imagine the limitless immense possibilities that exist in India to make use of the Rollformed Strut Channels in different fields of activities in the years to come.

The author Mr A S Shetty is the honorary editor and the chief executive of Sedvik Industries. For your queries you can contact him at 080-25452669 or email him at sedvik@vsnl.com