

ROLLEFORMING

Sections used in Prefabricated Metal Buildings

A S Shetty

In this Twentyfourth series of articles on Rollforming we will discuss about the sections used in Prefabricated Metal Buildings. One of the fastest growing fields all over the world and especially in the advanced countries is the building activity. It is getting increasingly realised now that prefabricated metal buildings could be erected within a short period, they are simple to build, energy efficient, economical, stronger, not prone to earth quakes and of better quality.

The design of the buildings could be adapted to modular concept, faster and flexible and could be designed more aesthetic looking. Most of the sections used in prefabricated buildings like Roofing sheets, Z-Purlins, Strut sections, False-ceiling sections, Partition Sections, Door and Window frame sections are Rollformed Sections.

The Prefabricated buildings could be broadly classified into three categories i.e Domestic buildings, Permanent industrial & Agricultural buildings and Relocatable/Hire buildings.

Following are some of the main areas where prefabricated structures are used Residential buildings, factories, ware houses, grain storage silos, workshops, metal storage hangers, farm buildings, temporary shelters, office buildings, aircraft hangers, sports buildings, military shelters, construction shelters, relocatable structures, bulk storage buildings, anti vandal site accommodations, fire related site accommodations, sports changing rooms, self contained portable buildings, super markets, schools, telecommunication shelters, community centres, petrol pump stations, railway stations, restaurants, holiday cabins, garages, semi-permanent accommodation facilities etc.

In India the requirement of housing is going to be huge in the coming years and the present masonry construction technology cannot fully satisfy the increasing demand which is going to be created year after year. Hence the only the alternative is to step up activities of prefabricated buildings. In

the advanced countries there are hundreds of specialised companies dealing with pre engineered metal buildings. They have been constantly developing several types of prefabricated portable and modular based buildings with complete design flexibility. There are companies which specialise in Arch Buildings for material & equipment storage for military barracks & housing, Fire & Housing emergency service facilities, indoor stadium, gymnasium & recreation buildings, school buildings.

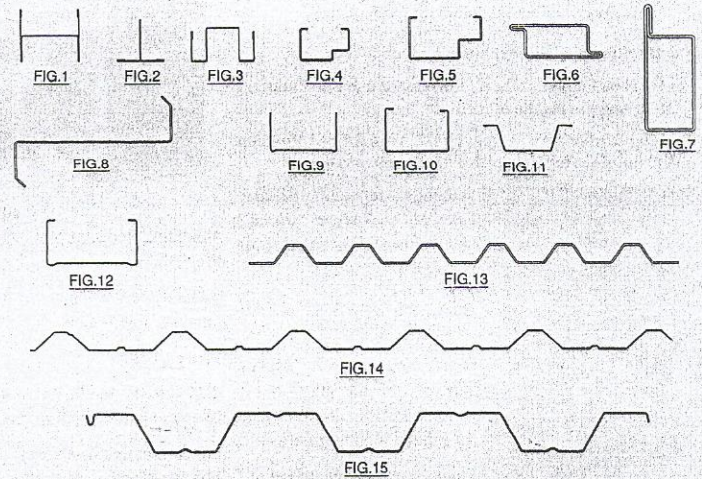
Relocatable/Hire buildings are of quick delivery & erection type with minimum foundation requirements. They could be completely relocatable and extended at any time with unique design features.

Apart from the Steel Framing structures the other major components of prefabricated buildings are Roofing & Wall Cladding System, Partition Wall system and False Ceiling systems. Roofing sheets/wall claddings are generally made of rollformed steel coils. Steel sheets are normally zincalume or galvanised profiled sheets permanently colour coated. If required, they could be provided with insulation material for inside temperature control. False ceilings are usually required for residential building or offices. From the ceiling metal framework is hung and false ceiling of rigid boards are fixed on to the frame work. Partition walls are usually required for residential building or offices. Partition wall generally

comprises of sandwich panels fixed to the columns and purlins.

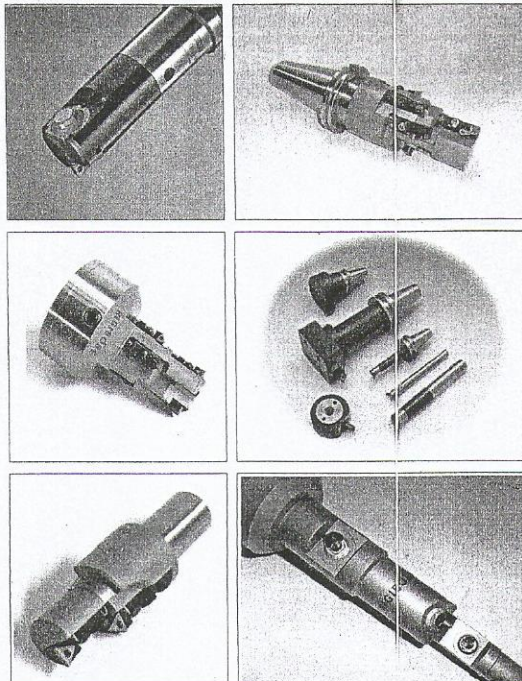
Some of the typical Rollformed Sections used for prefabricated buildings are shown in Fig.1 to Fig.15. Fig.1,2,3,9&12 are partition sections. Fig.4 to 7 are window and door frame sections. Fig. 9,10,&11 are false-ceiling sections. Fig.8 is Z-Purlin section. Fig.13 &15 are decking sections and Fig.14 is roofing sheet section. All these sections and many more have been developed by Sedvik Industries, Bangalore.

With the steadily increasing availability of coiled flat steel products, galvanised and pre-painted steel coils in the required widths and thicknesses in the coming years along with the required rollformed sections and the growing demand for all types of buildings the pre-fabricated building industry is going to grow many folds in the years to come in India.



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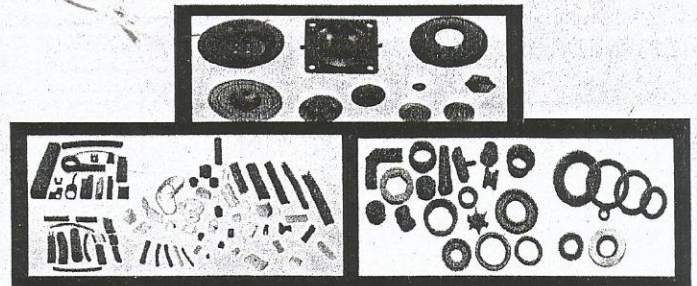
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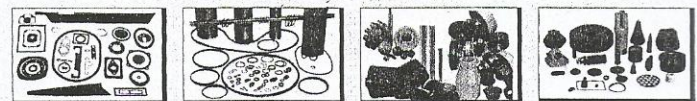
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