

## 5.11 Concluding remarks

In this chapter the difference between cold rolled steel and hot rolled steel has been discussed and the merits of the former are outlined. The concepts of "effective width" and "effective section" employed in the analysis and design of cold rolled section have been explained. The difference between "stiffened" and "unstiffened" elements has been explained. Considerations in the design of cold rolled beams have been explained and formulae employed for the limit state design of beams made of cold rolled sections have been provided.

In the two preceding chapters on cold rolled steel, a detailed discussion of design of elements made from it has been provided, the major differences between the hot rolled steel products and cold rolled steel products outlined and the principal advantages of using the latter in construction summarized. Design methods, including methods based on prototype testing and empirical design procedures have been discussed in detail.

Thin steel products are extensively used in building industry in the western world and this range from purlins and lintels to roof sheeting and decking. Light steel frame construction is often employed in house building and is based on industrialized manufacture of standardized components, which ensure a high quality of materials of construction. The most striking benefit of all forms of light steel framing is their speed of construction, ease of handling and savings in site supervision and elimination of wastage in site, all of which contribute to overall economy.

In the Indian context, industrialized methods of production and delivery of cold rolled steel products to site have the potential to build substantially more houses than is otherwise possible, with the same cash flow, thus freeing capital and financial resources for other projects. Other advantages include elimination of shrinkage and movement cracks, greater environmental acceptability and less weather dependency. Properly constructed light steel frames are adaptable to future requirements and will provide high acoustic performance and a high degree of thermal insulation. Provided the sheets are pre-galvanised, the members provide adequate corrosion protection when used close to the boundaries of the building envelope. The design life of these products exceeds 60 years.

