TRUSSES

Trusses are the frame formed by number of straight members connected in the form of triangles.

The embers are made by steel angles and they are joined by rivet or welding, these joints are called nodes.

It is assumed that the external loads act at the nodes only and the members are subjected to only tension or compression.

The compression members are called as struts and the tension members are called as ties.

Steel roof trusses are used under the following condition:

- Large spans are to be covered.
- Intermediate columns are to be avoided to have an unobstructed working area inside.
- There is a heavy rain or snow fall.

Types of roof trusses

King post truss

Traditional King Post Roof Truss

Here the common rafters are supported by wooden frame work called truss under required interval.
The frame work consist of a king post, two struts two principal rafters and tie beam.
The truss rest on stone bed blocks at either end.
The common rafters rest on wooden purlins which in turn are fixed to the principal rafters of the truss.
The king post connect the ridge post and the middle of the tie beam.
The struts are connected to the king post at the bottom and the principal rafters at the top.
The roofing material is fixed to the common rafters king post truss is used for spans of 5m to 9m.
Queen post truss

The framework consists of two principal rafters, two queen post, one straining sill, two struts, one tie beam, and one straining beam.

The common members rest on wooden purlins.

The straining beam resists the horizontal thrust developed.

The struts are connected to the queen post at the bottom and the principal rafters at the top.

North light roof truss

North light or sawtooth roof truss is a special type of roof trusses suitable for factories engaging in manufacturing work.

North light truss is sawtooth.

Actual lighting is taken advantage of during day time by using the north light roof trusses. In this type of trusses, vertical drops are provided. These drops are covered with glasses so as to permit light in to the interior.

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