

### 3.1 EFFICIENCY OF MATERIAL USED

One of the principle aims of the prefabrication in general but particular of prefabrication on the site is that the dead load of precast member should be lessened to the Greater possible degree .

This also correct because the greater part of the stresses are caused by dead load is by the uses of stresses.

This was due to frequently developing cracks in the tension chords.

One can find no real reason for this aversion partly because the cracking of tension chord has no significance and partly because the possibility of cracking can be reduced by stressing the tensioned bars before there concreting.

Fibster welder used to stress the tensioned bar after the load had been applied vierendeel columns are excellent for the stanchions of frames and the columns of other reinforced concrete structures while trusses are fairly suitable for use in any kind of that structure .

They are particularly applicable for industrial buildings.

Trusses and vierendeel columns in addition to making the smallest demand in material open up new possibilities for the aesthetic forming of the interior of the building.

The structure manufactures in a horizontal position requires less material for shuttering their reinforcement and concreting is also simple.

An additional advantage of these type of columns is that tube pipes and other lines can be easily be attached to and led through the shaft.

This means that forms the standard point of operation, lost and unutilized area decrease to a minimum inside the building itself.

The problem of vierendeel column connecting to a truss is solved by using a hinge.

In comparison with a structure with moment t-bearing joints the above solution is connected with greater force effect.

If vierendeel columns and trusses are used the bearing of latter requires only a slight surplus in material.

Arched structure can be produced in the trussed form.

The spread of reinforcement concrete trusses, trussed arches and vierendeel columns has been impeded by their difficult monolithic execution complicated reinforcement as well as by the difficult calculation of secondary stresses.

