

1.2 PRINCIPLES OF PREFABRICATION TECHNIQUES

Design for prefabrication, preassembly and modular

Construction. Simplify and standardize connection details.

Simplify and separate building systems.

Consider worker safety during Deconstruction Minimize building Components and materials.

Select fittings, fasteners, adhesive and sealants that allow for quicker assembly and facilitate the removal of reusable materials.

Design to accommodate deconstruction

Logistics. Reduce building complexity.

Design for reusable materials.

Design for flexibility and adaptability.

ADVANTAGES

Self supporting readymade components are used, so the need for formwork, shuttering and scaffolding is greatly reduced.

On-site construction and condition is minimized.

Less waste may occur.

Construction time is reduced and buildings are completed sooner, allowing an earlier return of the capital invested.

Quality control can be easier in a factory assembly line setting than a construction site setting.

Prefabrication can be located where skilled labour is more readily available and costs of labour, power materials, space and overheads are lower.

Time spoil in bad weather or hazardous environments at the construction site is minimized. Saving in cost, material, time & manpower. Shuttering and scaffolding is not necessary. Independent of weather condition.

DISADVANTAGES

Careful handling of prefabricated components such as concrete panels (or) steel and glass panels is reduced.

Similarly leaks can form at joints in prefabricated components.

Attention has to be paid to the strength and corrosion resistance of the joining of prefabricated sections to avoid failure of the joint.

Transportation costs may be higher for voluminous prefabricated sections than for the materials of which they are made, which can often be packed more efficiently.

Large group of buildings from the same type of prefabricated elements tend to look drab and monotonous. Local jobs are lost.

