

- (v) Should utilize the space most effectively; may be cubical utilization.
- (vi) Should provide worker's convenience, promote job satisfaction and safety for them.
- (vii) Should avoid unnecessary investment of capital.
- (viii) Should help in effective utilization of labour.
- (ix) Should lead to increased productivity and better quality of the product with reduced capital cost.

Types of Plant layout

Four Main Types of Plant Layout

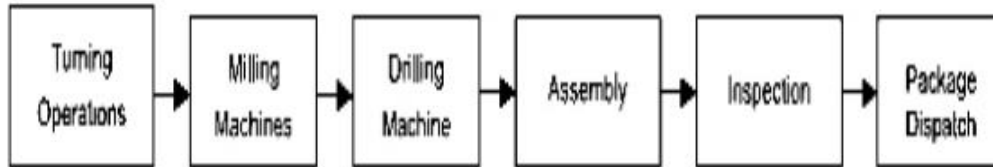
1. Product or Line Layout
2. Process or Functional Layout.
3. Fixed Position Layout.
4. Combination type of Layout.

1. Product or Line Layout

If all the processing equipment and machines are arranged according to the sequence of operations of the product, the layout is called product type of layout. In this type of layout, only one product of one type of products is produced in an operating area. This product must be standardized and produced in large quantities in order to justify the product layout.

The raw material is supplied at one end of the line and goes from one operation to the next quite rapidly with a minimum work in process, storage and material handling. Fig. 8.3 shows product layout for two types of products A and B.

Model of product Lay-out



Advantages offered by Product Layout:

- (i) Lowers total material handling cost.
- (ii) There is less work in processes.
- (iii) Better utilization of men and machines,
- (iv) Less floor area is occupied by material in transit and for temporary storages.
- (v) Greater simplicity of production control.
- (vi) Total production time is also minimized.

Limitations of Product Layout:

- (i) No flexibility which is generally required is obtained in this layout.
- (ii) The manufacturing cost increases with a fall in volume of production.
- (iii) If one or two lines are running light, there is a considerable machine idleness.
- (iv) A single machine break down may shut down the whole production line.
- (v) Specialized and strict supervision is essential.