

## **Types of Plant layout**

Types of layout can be classified into the following three types:

1. Process or Functional Layout
2. Product or Line Layout
3. Static Product or Fixed Layout

### **1. Functional or process layout**

In this layout, the machines performing same type of operations are installed at one place i.e. they are grouped according to functions e.g. all stitching machines in a tailor shop are located at one place known as stitching or sewing section. This type of layout is most appropriate for intermittent (JOB and BATCH ) type of mfg systems where small qty's of a large range of products are to be manufactured.

### **Advantages of Functional or Process Layout**

1. Each production unit of the system works independently and is not affected by the happenings in another section of the plant.
2. Scope for more skilled labour leads to better quality in production.
3. Wide flexibility in production facilities.
4. Effective supervision.
5. Machine breakdown doesn't disrupt production.
6. Lower capital invt. (less duplication of machines).

### **Disadvantages**

1. More material handling.
2. Longer processing time as more time is required for material handling and inspection.
3. Require substantial production planning and control.
4. Requires more floor space.
5. Inspection s more frequent and costlier.

6. Requires highly skilled labour.

**2. Line of product layout:-** This layout is suitable in those industries which are engaged in Mass production. In this layout, the position and order in the sequence for a machine performing particular operation is fixed. There is a continuous flow of material during the production process from start to finish.

### **Advantages of Line or Product Layout**

1. Ensures smooth and regular flow of material and finished goods.
2. Provides economy in materials and labour by minimizing wastage.
3. Short processing time.
4. Reduces material handling.
5. Low cost labour procurement and lesser training reqd's.
6. Lesser Inspection.

### **Disadvantages**

1. Product layout is inflexible in nature.
2. Chances of prod'n line to shut down.
3. Supervision is more difficult.
4. Requires heavy capital investment.

### **3. Static Product layout or Fixed Layout**

This type of layout is used in situations where the semi finished goods are of such a size and weight that their movement from one place to the other is not possible. Here men, equipment and the raw-material is moved to a place where all the manufacturing activities are carried out e.g. Ship building, constructions of dams etc..