

Unit III

Subject Name	Sub Code	Semester	Prepared by
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Meaning

Production planning and control is an important task of Production Manager. It has to see that production process is properly decided in advance and it is carried out as per the plan.

Production planning is the function of looking ahead, anticipating difficulties to be faced and the likely remedial steps to remove them. It is a technique of forecasting ahead every step in the long process of production, taking them at the right time and in the right degree and trying to complete the operations at maximum efficiency.

Definition

Production planning and control involves generally the organization and planning of the manufacturing process. It consists of the planning of the manufacturing process. It consists of the planning of the routing, scheduling, dispatching and inspection, co-ordination and control of materials, methods, machines, tooling and operating times

Characteristics of production Planning and Control

- 1.It is the planning and control of manufacturing process in an enterprise.
- 2.All types of inputs like materials, men, machines are efficiently used for maintain efficiency of operations.
- 3.Various factors of production are integrated to use them efficiently and economically.
- 4.The manufacturing process is organized in such a way that none of the work centres is either overworked or under worked.
- 5.The work is regulated from the First stage of procuring raw materials to the stage of finished goods.

Objectives of Production Planning and Control

- 1.To determine the requirements for men, materials and equipment.
- 2.Production of various inputs at the right time and in right quantity.
- 3.Making the most economical use of various inputs.
- 4.Arranging production schedules according to the needs of marketing department.

5. Providing for adequate stocks for meeting contingencies.
6. Keeping up to date information processes.
7. Making efforts to adhere to production schedules.
8. To ensure that the goods are produced according to the prescribed standards and quality norms.
9. To ensure that work progresses according to the predecided plans.

Production Planning and Control

Functions

1. Routing
2. Scheduling
3. Dispatching
4. Follow-up

1. Routing

- It is the method of determining the chain of operations to be carried out in the production line .
- This information is given by a product engineering function.
- A route sheet is a document giving the guidelines and information for conversion of raw materials into finished products.

Route Sheet contains the following information:

- The necessary operations and their sequence.

Machine has to be used for every operation

- Projected set up and operation time per piece of finished product.
- Description of raw materials to be used for production.
- Inspection procedure and tools required for inspection.
- Product packing and handling guidelines during the movement of parts and sub-assemblies through the operation stages.

2. Scheduling

- It involves standardizing the priorities for each work and determining the starting and finishing time for each process or operation.
- It gives a time table for production, representing the total time period essential for the production of a specific product.

Objectives of Scheduling

- To avoid unbalanced utilization of time and various departments as well as work centres.
- To utilize labour in an efficient manner such that the target is achieved well within the established lead time to dispatch the order in time and complete production at a minimum total cost.

3. Dispatching

- It is defined as making the production-related activities in a dynamic manner by issuing the orders and guidelines in agreement with the previously planned time frames.

It also gives a means for comparing actual progress of the work with respect to the planned progress.

Functions of Dispatching

Ensuring the smooth flow of raw material and other accessories from stores to production operation and then from one operation to the next operation until all production processes are carried out in the unit.

Example: In a garment unit, it comprises the flow of fabric to inspection and then to the spreading room, cutting section, sewing room, finishing, packing and dispatching.

- Gathering tools like cutting tools, sewing tools etc. from tool stores and delivering them to the concerned department.

Delivering the specification sheets, drawings and route cards to the concerned departments.

- Giving the schedule of inspection by the buyers in an organization and delivering it to the inspection section of the line.

4. Follow-Up

It confirms that the process is done as per the production plans and delivery schedules are met.

Progressing comprises activities like status reporting, attending to bottleneck processes in the production line and estimating them, controlling of deviations from the planned performance levels, monitoring and follow-up of progress of work in all stages of production, co-ordinating with stores, tool room, purchase and maintenance departments and revising the production plans and replanning it if necessary

Reasons for Follow Up:

- 1.Delay in supply of materials.
- 2.Excessive absenteeism

3.Changes in delivery schedules initiated by the customers.

4.Breakdown of machines, tools etc.

5.Errors in design drawings of patterns and process plans.

Principles of Production Planning and Control

1.Customer demand

- Before planning production it is necessary to know how much to produce.
- Production planning focuses on the principle of meeting the targeted customer demand rate in the most efficient way possible .

2.Materials

- To fulfill the production target, the materials availability needed to be produced should be ensured.
- The most efficient production planning keeps the minimum materials as standard inventory.
- Planners should evaluate how much material the company needs, the lead time for orders, delivery time for suppliers.

3. Equipments

- The production planner takes into account the capabilities of the equipment used to produce the output.

4. Manpower

- Manpower planning requires accurately estimating the number of employees required to do the work.
- The capacity of the workforce has to match the capabilities of the equipment to plan for the highest efficiency.

5.Processes

- Effective production planning makes sure that the processes used for the output continue to operate efficiently and safely.
- Normal operation of a process requires occasional testing adjustments.

6.Controls

- Check inventory, use of qualified suppliers and personnel, standardization.
- When controls are in place, it enables to take possible corrective actions to minimize the effects and return production to the required levels.

The production planning solution was designed to cater all the issues related to production

Purchasing -Meaning

Purchasing means procurement of materials, tools and equipments etc required for industry.The importance of the purchasing function varies with the nature and size of industry

Objectives of purchasing

1. To avail the materials, suppliers and equipments at the minimum possible costs

- These are the inputs in the manufacturing operations.
- Minimisation of the input cost increases the productivity and profitability of operations.

2. To increase the asset turnover

- The investment in inventories should be kept minimum.
- This increases profitability of the company.

3. To develop an alternative source of supply

- It minimizes the cost of materials
- It increases the ability to meet the emergencies.

4. To establish and maintain good relations with the suppliers

- It helps in evolving a favourable image in the business circles.
- It is beneficial to the buyer in terms of charging the reasonable price.

5. To achieve maximum integration with the other department of the company

Purchase function is related with production department for specification and flow of materials

- Engineering department for the purchase of tools, equipments, and machines.
- Marketing department for the forecast of sales and its impact on procurement of materials.
- Financial department for the purpose of maintaining levels of materials and estimating the working capital required.
- Personnel department for the purpose of developing the personnel and maintaining good vendor relationship.

6. To train and develop the personnel

- Purchasing department is manned with varied types of personnel.
- The company should build the imaginative employee force through training and development.

7. Efficient record keeping and management reporting

- Paper processing is inherent in the purchase function.
- It should be standardized so that the record keeping can be facilitated.
- Periodic reporting to the management about the purchase activities justifies the independent existence of the department.

Principles of Purchasing

- Right Quality

- Right Quantity
- Right Source
- Right Price
- Right Time
- Right Place

Importance of Purchasing

- Purchasing function provides materials to the factory
- Saving in materials cost.
- Purchasing can contribute to import substitution and save foreign exchange.
- Purchasing is the main factor in timely execution of industrial projects.
- Growing worldwide markets have contributed to the importance of purchasing.

PURCHASE PROCEDURE

1. Determining purchase Budget
2. Purchase Requisition
3. Tenders or Quotations
4. Purchase Orders
5. Receiving and inspecting materials
6. Checking and passing of bill of payments.

1. Determining Purchase Budget

- Purchase Budget is prepared based on production planning
- Purchase Manager prepares purchase budget .
- It is based on the quantity of the materials required for production.
- It helps to control production cost.

2. Purchase Requisition

- It is a formal request initiated by storekeeper for the purchase of specific items.
- It informs purchase department about the need for purchase of materials.
- It fixes the responsibility of the department making the purchase requisition.
- It is used for future reference.

3. Tenders or Quotations

- After receiving purchase requisition the purchase department has to find the best source for purchasing material.

- Selection of supplier is made after receiving quotations from the sources of supply
- Invitations for tender is made in prescribed form.

4.Purchase Order

- It is an agreement with the supplier for the supply of materials.
- It contains details regarding quantity of materials to be purchased, quality, price, trade discount, mode of payment.
- It is prepared by the Purchase Officer.

5.Receiving and Inspecting Materials

- The receiving department should perform the function of unloading and receiving of materials dispatched by the suppliers.
- It has to verify the quantity and condition of materials.

6.Checking and Passing of Bill for Payment

- When the invoices are received from the supplier it is sent for verification.
- After the verification, the stores department requests the accounting department to make the payment to the supplier.
- Payment will be made according to the terms specified in the contract.

The Contents in this E-Material has been taken from the text and reference book as given in the syllabus.