

PRODUCTION PLANNING AND CONTROL (PPC)

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LECTURE CONTENT

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Production Planning and Control – Meaning

- PPC is a technique of forecasting ahead, every steps of the proposed production process, taking them at the right time, at the right place, in the right quantity, in the right quality and at the right price in order to ensure efficiency and effectiveness of the overall production operation.
- PPC is all about management of production operation of any manufacturing enterprise involving three basic considerations namely, what work shall be done; how the work shall be done and when the work shall be done.

Objectives of PPC

- To deliver quality goods in right quantity, right time, right place and right price.
- To ensure optimum utilization of available production resources.
- To maintain optimum inventory level
- To maintain flexibility in operations
- For better coordination and communication
- For better prediction and forecasting of future demand

Role of PPC

- Product Design and Development
- Selection of Machines and production equipments
- Job Design and Process Design
- Designing of Labour skills and training programs
- Raw Material selection
- Sub-contracting
- Implementation and Controlling of Production Schedule

Scope of PPC

- Raw Material and Production Methods
- Machines and Equipments
- Management of Manpower
- Estimating, Routing, Scheduling and Loading
- Inspection and Evaluation
- Dispatching and Cost Control

Techniques of Production Planning

- **Estimating** : This phase is mainly concerned with **the quantity of the product to be manufactured** which is usually aligned with the sales or demand forecasting.
- **Routing**: This technique involves deciding upon the route or the path or sequence of operation through which the raw material would travel from one stage to another before being converted into final or finished product. At the end of this phase a document called as **Route Sheet** is produced which contains the blue print of the overall production process and details of successive intermediate stages
- **Scheduling**: This phase involves fixing of priorities for each production sub- process or jobs along with indicating the start and end time of each of the jobs.
- **Loading**: This stage involves preparation of machine loading chart which shows the planned activity and utilization of men and available machinery.

Techniques of Production Control

- **Dispatching:** This technique is all about setting up the initial and subsequent production activities into motion as per the production plan by placing the order with the vendors and suppliers as per the schedule requirements. It also involves various other operations such as
 1. Movement of materials to different workstations.
 2. Movement of tools and fixtures necessary for each operation.
 3. Beginning of work on each operation.
 4. Recording of time and cost involved in each operation.
- **Expedite/ Follow-up/ Progression:** This stage involves various follow-up mechanisms such as status reporting, review and progress charts in order to ensure the timely completion of overall operations as per production schedule. In this stage various corrective actions can also be taken if any deviation is found which may involve activities such as adjusting the route, rescheduling of work by changing the workloads, repairs and maintenance of machinery or equipment, control over inventories etc. Also, if the cause of deviation is the poor performance of the employees then certain other corrective steps can be taken such as personnel decisions like training, transfer, demotion etc.
- **Inspection:** The overall objective of this stage is to determine the quality of the goods which have been manufactured. It also provides an important tool for measuring the effectiveness of the overall planning and control operations.