

STANDARD OPERATING PROCEDURE (SOP): Production Planning Process

Objective

To establish a systematic approach for planning production based on customer requirements, inventory levels, quantity forecasts, and available production capacities.

Scope

This procedure applies to all planners and production staff involved in the manufacturing planning process.

Procedure

1. Product Determination (What to Produce)

- Customer requirements are the starting point of production planning.
- Based on these requirements, the planner identifies which products need to be manufactured.
- Planning tools such as MS Excel, Oracle, IBM, or SAP HANA may be utilized to organize and manage product planning efficiently.

2. Requirement Timing (When to Produce)

- Each organization maintains safety stock levels to ensure uninterrupted supply.
- The inventory level determines when products are required.
- If stock reaches the reorder level, the system automatically generates a replenishment requirement before further decline.
- The planner reviews this requirement and schedules production accordingly.

3. Quantity Determination (How Much to Produce)

- Forecasts provide the monthly quantities required for each product.
- These forecasts help planners:
- Schedule production by month.
- Maintain inventory at optimal levels to avoid shortages or overstock.

4. Capacity Planning (Production Capability)

- Manufacturing depends on the available capacity of machines.
- Each machine has defined limitations and cannot exceed its specified production capacity.
- A good production plan should:
- Match planned quantities with existing capacities.
- If the forecast exceeds current capacity, include a plan for capacity enhancement (e.g., adding shifts, upgrading machines, or expanding resources).

Responsibilities

- Planner: To analyze requirements, monitor inventory, align forecasts, and develop capacity-based production plans.

- Production Manager: To ensure that planned production is executed within machine and labor capacities.

- Inventory/Stores Team: To monitor stock levels and provide accurate data to planners.

References

- Company Forecasting Reports

- Inventory Management System (Oracle/SAP/Excel/IBM)

- Machine Capacity Data Sheets