

Standard Operating Procedure (SOP): Kanban System Setup, Monitoring, and Replenishment

This SOP details the **Kanban system setup, monitoring, and replenishment** process, including establishing Kanban card quantities, defining reorder points, tracking inventory levels, coordinating with suppliers, and ensuring timely replenishment. The goal is to optimize workflow efficiency, minimize stockouts, reduce excess inventory, and maintain continuous production through effective visual inventory management.

1. Scope

This procedure applies to all departments utilizing Kanban for inventory control and continuous production processes.

2. Responsibilities

- **Inventory Manager:** Oversees Kanban system implementation, sets reorder quantities, and reviews performance.
- **Line Staff:** Monitors inventory levels, triggers Kanban cards, and ensures accurate updates.
- **Procurement:** Places orders with suppliers as prompted by Kanban signals.
- **Suppliers:** Delivers materials promptly based on Kanban replenishment requests.

3. Procedure

1. Kanban System Setup

- Identify and list all items to be managed using Kanban.
- Analyze consumption rates and lead times for each item.
- Calculate and establish the required number of Kanban cards using the formula:
$$\text{Number of Kanban cards} = (\text{Average usage per period} \times \text{Lead time}) / \text{Container size} + \text{Safety stock}$$
- Prepare and label cards or signals with item details, quantities, location, and supplier information.
- Position Kanban cards at points of use and in the stock area as agreed upon.

2. Defining Reorder Points

- Determine minimum stock level before replenishment is triggered.
- Document reorder points on Kanban cards.

3. Monitoring Inventory Levels

- Staff monitor designated inventory locations regularly.
- When inventory reaches reorder point, remove/send the Kanban card to the appropriate department or supplier.
- Track movement of Kanban cards to maintain real-time inventory status.

4. Coordinating with Suppliers

- Procurement receives Kanban signals and sends purchase orders as needed.
- Communicate lead times, expected delivery dates, and quantities with suppliers.
- Confirm receipt and accuracy of replenishments upon delivery.

5. Replenishment and Continuous Improvement

- Re-stock items in correct locations promptly after delivery.
- Return Kanban cards to their origin once items are replenished.
- Periodically review consumption rates, lead times, and Kanban card quantities; adjust as necessary for process improvement.
- Document any issues (e.g., stockouts, overstocking) and update SOPs or Kanban processes as required.

4. Documentation

- Kanban card logs or digital system records
- Inventory reconciliation sheets
- Supplier delivery confirmations
- Review and audit reports

5. Review and Audit

- Regularly audit the Kanban system's efficiency.
- Document findings, improvements, and changes made to the system.

6. References

- Lean Manufacturing Principles
- Company Inventory Control Policies