Standard Operating Procedure (SOP)

Kanban Inventory and Material Replenishment Process

This SOP details the **Kanban inventory and material replenishment process**, outlining the steps for managing inventory levels, triggering replenishment signals, and maintaining optimal stock availability. It covers the design and use of Kanban cards, monitoring inventory status, communication between production and supply teams, and timely ordering and delivery of materials to prevent shortages and overstock. The objective is to streamline inventory management, reduce waste, and ensure a smooth production workflow through effective material replenishment practices.

1. Purpose

To provide standardized procedures for efficient inventory monitoring, timely material replenishment and communication using the Kanban method.

2. Scope

This procedure applies to all personnel involved in inventory management, materials supply, and production within the facility.

3. Responsibilities

- **Production Team:** Monitor stock levels, trigger replenishment.
- **Materials/Supply Team:** Procure and deliver materials as per Kanban signals.
- **Inventory Supervisor:** Oversee Kanban system health, resolve discrepancies, and update Kanban levels as required.

4. Definitions

Term	Definition
Kanban	A visual signal (card or board) used to trigger actions in inventory management and replenishment.
Kanban Card	A physical or electronic card indicating when to reorder or restock a specific item.
Replenishment Signal	An event (usually the movement of a Kanban card) that triggers ordering new materials.

5. Procedure

1. **Kanban Design and Installation**
    - Determine optimal inventory levels based on usage and lead time.
    - Create Kanban cards indicating item, quantity, supplier, bin location, and reorder point.
    - Install Kanban card holders at stock points and train relevant staff.

2. **Monitoring Inventory Status**
    - Regularly monitor inventory bins and Kanban stations during each shift.
    - Remove Kanban card when the minimum stock level is reached.

3. **Triggering Replenishment**
    - Place removed Kanban card in designated collection area for the supply team.
    - Supply team collects Kanban cards at scheduled intervals for processing.

4. **Replenishment Fulfillment**
    - Supply team orders or retrieves indicated materials as per Kanban card quantities.
    - Restock material bins and return Kanban card to its original holder.
    - Confirm restocking in inventory management system, if digital tracking is used.

5. **Communication**
    - Production and supply teams communicate shortages, system faults, or discrepancies immediately.
    - Inventory supervisor reviews Kanban records weekly; adjusts card levels as needed.

6. **Continuous Improvement**
    - Periodically review inventory consumption data and update Kanban quantities as production needs evolve.

- Solicit team feedback to identify bottlenecks and process enhancements.

6. Documentation

- Maintain records of Kanban card movements.
- Document inventory discrepancies and corrective actions taken.
- Archive supply orders and restocking logs.

7. Revision History

Version	Date	Description	Author/Editor
1.0	2024-06-06	Initial SOP release	Your Name