Standard Operating Procedure (SOP): In-process Quality Control and Defect Management

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1. Purpose

This SOP details the procedures for **in-process quality control and defect management**, encompassing continuous monitoring of production processes, identification and documentation of defects, corrective action implementation, and prevention of recurrence. The objective is to maintain high product quality standards, minimize defects, enhance process efficiency, and ensure customer satisfaction through systematic defect detection and resolution during production.

2. Scope

This procedure applies to all production stages and personnel involved in the manufacturing or assembly process at [Company/Department Name].

3. Responsibilities

- **Production Staff:** Adhere to procedures and report defects immediately.
- **Quality Control (QC) Inspectors:** Monitor in-process quality and record defects as per the protocol.
- **Production Supervisors:** Oversee corrective actions and ensure preventive measures are implemented.
- **Quality Assurance (QA) Team:** Conduct audits and review defect patterns for process improvement.

4. Procedure

1. **In-process Monitoring**
   - QC Inspectors perform regular inspections at critical control points as per the quality plan.
   - Use checklists and control charts for consistent monitoring.
2. **Defect Identification**
   - Immediately tag, segregate, and record suspected non-conforming products.
   - Classify defects (e.g., Critical, Major, Minor) as per defect classification guidelines.
3. **Documentation**
   - Document all defects in the *Defect Log Sheet* (see template below).
   - Record details such as defect type, location, quantity, responsible operator, and date/time of occurrence.
4. **Corrective Actions**
   - Investigate root cause of each defect using tools such as 5-Whys or Fishbone Diagram.
   - Implement corrective action with evidence of completion (signed off by supervisor).
   - Re-inspect to verify effectiveness of corrective actions.
5. **Preventive Measures**
   - Analyze defect trends for recurring issues.
   - Update process parameters, retrain staff, or change materials as needed.
6. **Reporting**
   - All records and findings must be submitted to QA for review and analysis.
   - Serious or repeated defects must be escalated immediately to management.

5. Defect Log Sheet (Template)

Date/Time	Process Step	Defect Description	Severity	Quantity	Responsible Person	Immediate Action Taken	Corrective/Preventive Action
[YYYY-MM-DD hh:mm]	[Process Name or ID]	[Describe defect]	[Critical/Major/Minor]	[Number]	[Name]	[Isolate/Repair/Scrap/etc.]	[Describe action]

6. Records Management

- All documentation must be completed at time of activity and retained for minimum [X] years.
- Only authorized personnel may update or revise records.

7. References

- [Related SOPs]
- [Quality Manuals & Guidelines]

- [Applicable Regulatory Standards]

8. Revision History

Version	Date	Description of Change	Approved by
1.0	[YYYY-MM-DD]	Initial issue	[Name]