Standard Operating Procedure (SOP): Product Inspection Process

This SOP details the **product inspection process** through a comprehensive step-by-step approach, ensuring each product meets quality standards. It covers initial visual checks, measurement verification, functional testing, defect identification, documentation of findings, and final approval or rejection criteria. The goal is to maintain consistent product quality, reduce defects, and enhance customer satisfaction by following a standardized inspection methodology.

1. Purpose

To ensure all products meet the defined quality standards before approval and delivery to customers.

2. Scope

This procedure applies to all finished products before shipment or delivery, across all production lines.

3. Responsibility

- Quality Inspectors: Responsible for conducting inspections and completing documentation.
- Production Supervisors: Responsible for ensuring inspection procedures are followed.
- Quality Manager: Final review and approval of inspection results.

4. References

- Product Quality Standards Manual
- Inspection Checklists
- Defect Classification Guidelines

5. Definitions

Term	Definition
Defect	Any deviation from the required specification or standard.
Non-Conformance	Failure of a product to meet specified requirements.
Inspection	Systematic examination of product characteristics and quality.

6. Procedure

1. **Preparation**
    - Gather necessary tools: inspection checklist, measuring instruments, defect samples, and documentation forms.
    - Ensure inspection area is clean and well-lit.
2. **Initial Visual Inspection**
    - Examine the product for obvious physical defects (scratches, dents, incorrect labeling).
    - Check packaging for damage or inconsistencies.
3. **Measurement Verification**
    - Use appropriate measuring devices (calipers, rulers, scales) to verify critical dimensions.
    - Compare measured values with product specifications.
4. **Functional Testing**
    - Test product functionality according to operational procedures (e.g., switch on device, operate moving parts).
    - Record any functional issues or failures.
5. **Defect Identification**
    - Identify and classify any detected defects according to defect classification guidelines.
    - Tag non-conforming products for further review or rework.
6. **Documentation of Findings**

    - Complete inspection checklists, noting all findings and measurement results.
    - Photograph major defects or deviations as required.
7. **Final Approval or Rejection**
    - Review completed inspection documents with the quality manager or designated authority.
    - Approve products meeting all criteria; reject or return non-conforming products for corrective action.
8. **Reporting**
    - Submit completed inspection reports to the Quality Assurance department.
    - Log defect trends for continuous improvement initiatives.

7. Records

- Completed inspection checklists
- Defect and non-conformance reports
- Photographic records (if applicable)
- Approved product release reports

8. Revision History

Version	Date	Description	Author
1.0	2024-06-10	Initial release	Quality Dept.