Standard Operating Procedure (SOP): Final Product Inspection and Testing Protocols

1. Purpose

This SOP details the **final product inspection and testing protocols**, encompassing visual examination, dimensional verification, functional testing, quality assurance checks, defect identification and documentation, compliance with industry standards, and procedures for handling non-conforming products. The goal is to guarantee that all finished products meet specified quality requirements before release, ensuring customer satisfaction and regulatory adherence.

2. Scope

This procedure applies to all finished products before shipment to customers.

3. Responsibilities

- **Quality Control (QC) Inspectors:** Execute inspection and testing protocols.
- **Production Supervisors:** Ensure products are staged for final inspection.
- **Quality Assurance (QA) Manager:** Review inspection results and approve product release.
- **All Personnel:** Report defects and non-conformities as per this SOP.

4. Definitions

Term	Definition
Defect	Any non-conformity that affects product quality, function, or safety.
Non-Conforming Product	Product that fails to meet specified requirements or standards.
Functional Test	Test to verify product operates as intended.

5. Equipment & Materials

- Inspection checklists/forms
- Calipers, gauges, rulers
- Functional testing apparatus
- Camera (for defect documentation)
- Personal protective equipment, as required

6. Procedure

1. **Visual Examination**
   - Visually inspect each product for appearance, surface finish, labeling, and packaging integrity.
   - Record any observed defects on inspection forms.
2. **Dimensional Verification**
   - Measure all specified dimensions using calibrated equipment (e.g., calipers, gauges).
   - Compare findings against product specifications and record measurements.
3. **Functional Testing**
   - Perform required functional tests per product design/operating procedures.
   - Document pass/fail outcomes for all tests conducted.
4. **Quality Assurance Checks**
   - Verify that required inspections, verifications, and tests have been completed and passed.
   - Ensure all documentation is complete and signed off by authorized personnel.
5. **Defect Identification and Documentation**
   - Identify and record all non-conformances/defects, including photographic evidence where appropriate.
   - Log defects in the Non-Conformance Report (NCR) system.
6. **Compliance with Industry Standards**
   - Ensure final products meet applicable regulatory, statutory, and industry requirements.
   - File compliance checklists and certificates as required.
7. **Handling of Non-Conforming Products**
   - Segregate and label non-conforming products immediately.

- Notify QA Manager for disposition instructions (rework, scrap, return, etc.).
- Document all actions taken regarding non-conforming products.

7. Documentation

- Completed inspection and testing records
- Non-Conformance Reports (NCRs)
- Release authorization forms
- Compliance certificates and checklists

8. References

- Product specification documents
- Industry and regulatory standards (list applicable, e.g., ISO 9001)
- Company Quality Manual

9. Revision History

Version	Date	Description of Change	Author
1.0	2024-06-06	Initial SOP Release	Quality Department