

Quality Procedure

Testing & Inspection

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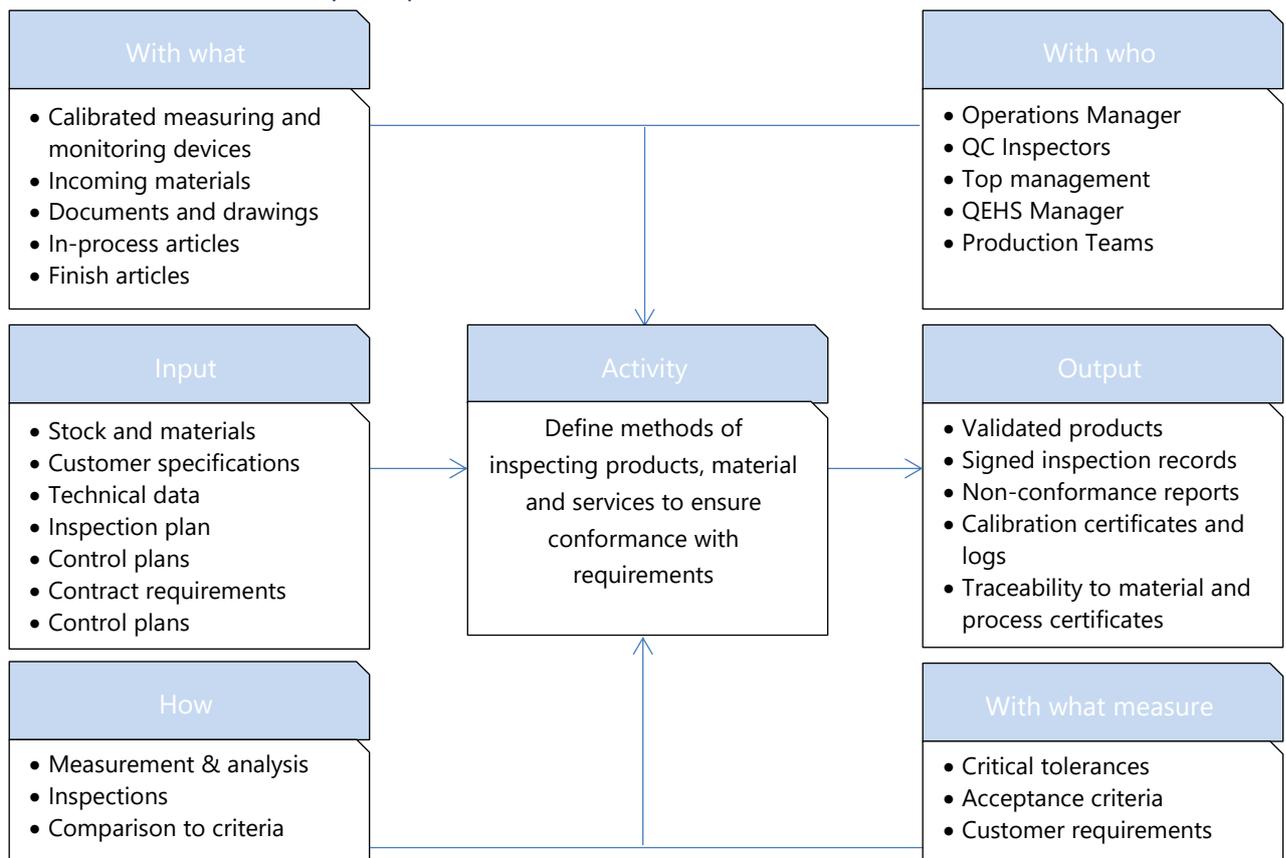
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1 Testing & Inspection

1.1 Introduction & Purpose

The purpose of this procedure is to establish and define the process for testing and inspection activities that verify product, material and service conformance, and to verify that process inputs and outputs conform to specified requirements. Documented Records and information of inspection include evidence of conformity with the acceptance criteria and traceability to the person authorizing the release. Records of inspection are maintained.

1.1.1 Process Activity Map



1.1.2 References

Standard	Title	Description
BS EN ISO 9000:2015	Quality management systems	Fundamentals and vocabulary
BS EN ISO 9001:2015	Quality management systems	Requirements
BS EN ISO 9004:2018	Quality management systems	Guidelines for performance improvements

1.1.3 Terms & Definitions

Term	Definition
Inspection	Conformity evaluation by observation/judgement/appropriate measurement or testing
Test	Determination of one or more characteristics according to a procedure
Verification	Confirmation, through the objective evidence (3.8.3), requirements (3.6.4) were fulfilled

1.2 Application & Scope

Your organization has implemented a process that includes all appropriate; methods, techniques, formats, etc.) to monitor and measure the characteristics of products and services to verify that requirements are being met. This procedure is applicable to all incoming materials, in-process testing and final articles.

Materials, components, subassemblies and finished products are prevented from use, assembly and dispatch until the required inspections are completed. When products are modified, they are fully re-inspected and re-tested. The required records of inspections and tests are established and maintained.

1.3 Responsibilities

The [Quality Manager](#) is required to:

1. Determine the extent and scope of in-process inspection and testing;
2. Determine the extent and scope of product inspection and testing;
3. Ensure that planned arrangements are satisfactorily completed prior to release.
4. Ensure that this procedure is implemented.

The [Quality Inspectors](#) are required to:

1. Undertake inspection and testing in accordance with specified requirements;
2. Preserve the identification of inspected and testing products.

1.4 Testing & Inspection Process

1.4.1 General

Materials, components, subassemblies and finished products are prevented from use, assembly and dispatch until the required inspections are completed. When products are modified, they are fully re-inspected and re-tested. The required records of inspections and tests are established and maintained.

1.4.2 Receiving Inspection

Upon receipt of products; receiving personnel verify the quantity of delivered units, check marking and identification of packages, and inspect all packages for any signs of tampering or damage. If all these checks and inspections are satisfactory, receiving personnel signs the delivery receipt. If not, any shortages or damages are noted on all copies of the delivery receipts

The received containers are then moved to the designated inspection area, a copy of the purchase order is retrieved, and the packing slips are removed from the containers. Upon opening the containers, the goods are verified against the purchase order and the packing slip, and are examined visually for any signs of damage.

The purchase order is stamped '**RECEIVED**' and is signed and dated by the receiving inspector. All receiving inspections are recorded using the *Receiving Inspection Log*. On critical parts and components, as determined by the [Quality Manager](#), a precision inspection and tests are performed. This type of inspection includes:

1. Review of relevance material certificates, supplier inspection records and compliance certificates;
2. Random sampling based on statistical technique specified;
3. Visual inspection to detect any damage or other visible problems;
4. Perform measurements and testing against specified requirements as required;
5. Record sample size, measurement and inspection test results using the *Inspection & Test Report*.

Any products or services supplied wrongly supplied, damaged or not in accordance with the purchase order requirements are documented onto a *Defective Part Report* and processed accordingly.

All purchased material which influences the manufacture of, or is intended for use as part of, deliverable products is subject to inspection and testing by [Quality Inspection Personnel](#).

1.4.3 First Article Inspection

[Quality Inspection Personnel](#) are to examine the first article as described below by reference to all applicable prints, machining samples, programmes, or other data, of each machining process which is to produce more than three (3) identical parts:

1. Examine all critical dimensions affecting product performance for length, distance, outside diameter, inside diameter, threads, taper, angle, height, depth, width, surface finish, diameter and radii;
2. Fit and function test the machining processes using the test or sample parts when specified on the drawings;
3. Perform a first article inspection on each consecutive part until a part has been produced which is within the target range for all dimensions;
4. Initial or stamp the dimensional record and/or traveller sheet with acceptance of the process when a successful first article inspection is achieved for the particular work in progress.

All first article inspections are recorded in the *First Article Inspection Log* and are retained to provide traceability, while any non-conformances are documented using the *Defective Part Report* and processed accordingly.

1.4.4 In-process Inspection

In-process inspections are conducted to ensure that the product or process conforms to specified requirements. The inspections and tests are normally carried out by [Quality Inspection Personnel](#). Peer reviews and process walk-throughs are utilized, as well as, random audits of the in-process inspection and testing process are conducted by [Quality Inspection Personnel](#).

All products are inspected and tested as required by the work order and/or documented procedures. The scope of the in-process inspection is determined by the [Quality Manager](#), and is communicated to each work area on the work order. As a minimum, the scope comprises:

1. Hold products until the required inspection has been completed and verified;
2. Review of the work order to ascertain that all specified operations, processes and first part inspections are signed-off;
3. Verify that applicable documents are available and traceable to the product;
4. Visual inspection of product to ascertain that all specified operations are complete and to detect any visible quality problems.

The [Quality Manager](#) determines the extent and scope of in-process inspection and testing based on the importance of the item, control methods and previous performance. All in-process inspections are recorded using the *In-process Inspection Log*. Any non-conformances are documented using the *Defective Part Report* and processed accordingly.

1.4.5 Final Inspection