

PRODUCT QUALITY AND QUALITY CONTROL

M.O.Yodgorova

BuxMTI assistenti

Sh.U.Baxriddinova

student of group 118-22 MSM

Sh.Sh.O'ktamova

student of group 120-23 MSM

Product quality refers to how well the product meets specified specifications and standards. Quality control refers to the part of inspections and tests that are carried out to ensure that the product conforms to quality standards throughout the manufacturing process.

Product quality and quality control are critical to business. Good product quality increases customer satisfaction, strengthens customer loyalty, and enhances company reputation. In addition, quality products are less likely to cause problems such as recalls or returns, reducing costs for the business.

The following steps can be taken by the enterprise to control the quality and quality of the product:

Determining quality standards: Determining product specifications and quality standards is important. These standards may include product design, material quality, workmanship standards, performance criteria, and other technical specifications.

Material Selection: It is important to use quality materials for a quality product. It is important to ensure the supply of high-quality materials by cooperating with suppliers and to constantly monitor the quality of the material.

Manufacturing Process Control: Standard processes and procedures must be established and implemented to ensure quality control throughout the manufacturing process. This includes proper monitoring of workmanship standards, establishment of quality control points and identification of defective products and taking necessary corrective action.

Testing and Inspection: Testing and inspection should be done regularly to assess the quality of the product. This includes laboratory tests, visual inspections, measurements, performance tests and other relevant test methods. Test results should be used to evaluate product quality and make necessary improvements.

Feedback and Improvement: Customer feedback and complaints are an important source of information. It is necessary to take into account the feedback of customers and carry out continuous improvement work to improve the quality of the product. The quality control process should include the analysis of feedback and the use of this information to eliminate errors in the production process.

As a result, product quality and quality control are critical to business success. Producing quality products increases customer satisfaction, builds reputation, and

provides a competitive advantage. Quality control should be carried out continuously based on continuous improvement and customer feedback.

The following test methods can be used to evaluate product durability and performance:

Vibration tests: Vibration tests can be performed to evaluate how the product behaves under vibration. These tests are aimed at ensuring that the product withstands vibrations, prevents loosening of components, prevents damage caused by vibration and maintains its performance.

Impact Tests: Impact tests are conducted to assess how a product reacts when subjected to a sudden shock or impact. These tests simulate situations such as moving, dropping or impacting the product. It is used to determine product durability, preserve components, and prevent damage.

Temperature Tests: Temperature tests are performed to evaluate how a product performs over a certain temperature range. These tests are aimed at checking the product's resistance to low temperature, high temperature or temperature changes. Temperature tests are especially important for electronic devices.

Moisture Tests: Moisture tests are performed to evaluate how a product performs in a wet environment. These tests are aimed at checking the product's resistance to humidity, moisture or water. Moisture testing is especially important for outdoor equipment, automotive parts or products that may come into contact with water.

Environmental testing: Environmental testing is conducted to assess how a product responds to specific environmental conditions. These tests test the product's durability and performance by simulating environmental factors such as dust, sand, salt water, and chemicals.

Life Tests: Life tests are conducted to evaluate how a product behaves under continuous use over a period of time. These tests are aimed at determining the life and durability of the product. These tests are typically applied to products such as electronic devices, mechanical equipment, and automotive components.

These test methods are commonly used to evaluate product durability and performance. Different tests can also be used depending on the product type, industry and quality objectives. The test aims to simulate the product's actual usage conditions as closely as possible and provides feedback to improve the product's durability and performance.

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