

THE IMPORTANCE OF TESTING IN THE PRODUCTION OF HIGH-QUALITY PRODUCTS IN ENTERPRISES

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Abstract: Product quality indicators and evaluation methods. The indicator of product quality means the quantitative description of one or more properties of the product, its application to specific conditions of its creation and use or consumption. They must meet the basic requirements of stability of quality indicators, help to increase production efficiency on a planned basis, taking into account scientific and technical achievements, ability to meet certain needs according to specific tasks. Functional indicators describe the properties of the product, determine their main tasks, determine the field of application of the product.

Keywords: Product, quality, indicators, importance, tests, production.

Composition and structure indicators represent the amount of chemical elements or group structures in the product [1]. The composition and structure indicators include the mass fractions of the structural components of steel, the concentration of various components in acids, the mass fraction of sulfur and ash in coke, the mass fractions of sugar and salts in food and other products. Raw materials, materials, fuel and electricity saving indicators describe the product's properties and represent its technical improvement level or the standard of raw materials, materials, fuel and electricity consumed by them. Many quality indicators of the product are their functions and parameters [2]. However, in most cases this relationship is difficult to understand adequately. The concepts of "symptom", "parameter" and "quality indicators" are interrelated. Describing the complex nature of products, it is called the functional ability of the product to fulfill its needs, purpose and tasks assigned to it. A complex property describing the artistic expression of the product, the correctness of the form, the integrity of the composition is called the aesthetics of the product. The safety of the product is its complex property, an indicator that determines the amount of harmful effects for humans [3]. The environmental friendliness of the product is considered one of its complex properties and determines the amount of harmful impact on the environment. The consumer price of the finished product is the sum of its consumption price and others and the costs of its consumption or use. The description of the product, which represents its differentiation from competing products both in terms of the

degree of compliance with a specific need and in terms of the costs of satisfying this need, is called its competitiveness. Quality, like other concepts, has its own system. A quality system is a set of organizational structures, responsibilities, work procedures, processes, resources, and the implementation of overall quality management. Selection of the nomenclature of the quality indicators of the specified product, determining the values of these indicators and comparing them with the basic values is called the evaluation of the level of product quality. To evaluate the level of product quality, products are divided into categories of products that are consumed in use and products that consume their own resources. Consumable products are used in the process of using products of the series according to their function [4]. Usually, recycling is an irreversible process, or it can be the burning of fuel, the assimilation of food products, and sometimes it can also be a reversible process. When using products of a category that consumes its own resource according to its function, its resource is consumed. In this case, the product is used due to its technical and spiritual obsolescence. The application of the specified description of the product is a number of actions when choosing the names of a single indicator of a certain group of products, determining the field of use of the product, selecting one or more samples as the basis, creating systems of state standards for the names of the quality indicators of the product. creates relief. It refers to the quality systems of activities that include quality from all sides, provide all its aspects and cover all life stages of the product. Quality work begins in the marketing area and ends with the stage of using the waste generated from the use of the product. The sum of these stages is called a quality ring, and its definition is given above. Special requirements are placed on the methodological basis of product quality assessment in quality systems, especially in mandatory and voluntary product certification, in which a comprehensive analysis and objective assessment of all properties of the product in consumption, the possibility of demonstrating safety and environmental friendliness, based on the given assessment, the consumer creation of a basis for social protection from the risk of the use and environmental protection of the product and the risk of incorrect assessment of the product and its quality is almost completely ensured by

The main purpose of evaluating the level of product quality is to justify the parameters of new types of products, to prepare technical assignments for the development of products, standards, and technical conditions, and to draw up technical level cards for new products, to make decisions based on the test results of manufactured products, to repair products, etc. making a decision is to create a basis for the product to be sufficiently valued in the market and sold at a reasonable price [5]. Different methods are used in the evaluation of product quality level: differential, complex, mixed and statistical methods. The differential method refers to the method of product quality assessment based on the use of a single indicator of the product. The

differential method is based on the comparison of the indicator of the quality of the evaluated product with the indicator that is the basis. For example, the service life of the equipment produced by one enterprise is 8 years, and at the second enterprise this number is 12 years, the basic value is lower than the basic value, and at the second it is higher. This indicator was achieved as a result of improving its service life. The method of product quality assessment based on the use of aggregate indicators of product quality is called an aggregate method. For example, when assessing the quality of buses, the generalized quality indicator is their annual productivity. The mixed method is the evaluation of the quality of the product using both single indicators and complex indicators at the same time. Mathematical statistical methods are used to evaluate the quality of the product using the statistical method. Organoleptic method - product quality is determined by smell, sight, hearing, taste. The chemical composition, physical, microbiological and technological properties of the product are determined by the experimental method. The result is expressed in numbers, but the time is long [6]. The expert method consists of no less than 7 highly qualified specialists-experts-commodity experts, designers, constructors, and the quality is evaluated according to their opinion. The expert commission consists of two groups: an expert and a working group. The expert group evaluates the goods, and the working group performs technical and organizational work, organization of survey work, distribution and collection of questionnaires, processing and analysis of expert evaluations. Classification of types of product testing. Product testing and types of tests are divided into classes according to international standards. Depending on the purpose of the tests, they can be carried out for research, for control, for comparison, for determining the value. Research tests are carried out in the process of experimental processing of a sample item in accordance with the design document. The purpose of this test is to study certain characteristics of the property of the object. A real sample can also be used as a test object. In these tests, information is obtained about the properties of the material or product. This information is necessary for more effective use of the identified feature. Control tests are carried out in order to control product quality, that is, to control the conformity of the quality indicator achieved in practice with the specified value. These tests are carried out during the production process. As a result of these tests, the causes of inconsistency are determined and eliminated, and a recommendation for further quality improvement is developed. Such tests are carried out only on real samples. Control tests do not provide sufficient information about product stability. In order to determine its durability, additional special tests such as long-term durability, non-destructive operation, storage and other tests should be conducted. The results of control tests are not only used to determine the unusability of the product, but the statistically processed result of the control test allows to determine the quality of technological processes and find ways to further improve it. Each parameter of the control test characterizes the

state of a certain part of the technological process. Comparison tests - testing similar or identical objects in terms of characteristics in the same conditions in order to test their properties. Determination test - the previously unknown values of the object characteristics with specified accuracy and reliability, and if necessary, a random size distribution is considered a test of determination with legal value [7]. Finished product testing is a qualification test-testing of the first industrial production batch of the product in order to assess the readiness of the enterprise to produce a specific product in a specified volume. Pre-delivery test is a test conducted by the technical service of the manufacturing enterprise before the product is presented to the customer, consumer or other receiving office [8].

In conclusion, tests are an integral part of the production process for enterprises aiming to deliver quality products. By prioritizing testing at every stage of production, businesses can uphold high standards, meet customer expectations, and achieve long-term success in the competitive market.

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