THE ROLE OF METROLOGY AND THE IMPORTANCE OF METROLOGICAL SUPPLY IN MANUFACTURING ENTERPRISES.

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Abstract: After the independence of our country, new ways of working in all sectors of the national economy became the demand of the times. After we gained independence, there was a need to review the standards and technical conditions for products, taking into account the requirements of the world market, to improve the provision of metrological services to the national economy, and to introduce complex measures for product quality management.

Key words: metrology, metrological supply, standard, product, quality, measurement types.

Metrology, standardization and certification are the main factor in ensuring reliability in the development of technique and technology. Metrology, standardization and certification are used in all spheres of the national economy in close connection with each other. The development of industrial relations began to require the improvement of measurement tools and methods. It is possible to distinguish three main stages of technical progress that determined the theory of measurements and the development of tools: the technological stage that requires the creation of measuring tools that participate in the production process and are attached to machine tools, the accuracy, reliability and the energetic stage that required a sharp increase in productivity, the stage of the scientific and technical revolution that required the inclusion of all the achievements of modern science in

the composition of measuring instruments [1]. One of the special features of this stage is the creation of measurement systems that evaluate the state of objects and processes using certain parameters, and use the obtained results directly for automatic control [2].

Metrology is the science of measurements, methods and means of ensuring their unity, and ways to achieve the required accuracy. The science of metrology is mainly the general theory of measurements, units of quantities and their systems, methods and tools of measurement, methods of finding the accuracy of measurements, the basis of ensuring the uniformity of the unit of measurements and measuring tools, standards and standard measurements. measurement tools, methods of transferring dimensions of units from standard or sample measuring tools to working tools deal with issues [3]. Thus, metrology is a science of measuring, that is, obtaining quantitative information, and is one of the important components of epistemology. Metrological service and supply. Measurement information is subject not only to quantitative requirements, but also to qualitative ones. This includes characteristics such as its accuracy, reliability, cost per unit and efficiency. Provides metrological support based on all quality specifications. Metrological support can be defined as follows: determination and implementation of technical tools, procedures and rules, standards, scientific and organizational bases necessary to ensure the unity of measurements and achieve the required accuracy. Based on this description, it can be said that the following tasks are assigned to the metrological supply: organization, provision and implementation of the serviceability of measuring instruments, development of normative documents on the implementation of measurements, processing of their results and recommendations output and implementation; development and implementation of normative documents on carrying out measurements, processing and recommending its results; examination of documents; state tests of measuring instruments; metrological certification of measuring tools and methods, etc. Organizations of metrological supply The scientific basis of metrology is the

science of measurements [4]. Creation and development of working tools from unit standards, unit standards of technical bases, mandatory state tests of measuring tools and metrological attestation of their performance methods, mandatory state control in the development, repair and use of measuring tools transfer, creation of standard samples on the composition and properties of substances and materials, standard references, mandatory state testing of products. The organizational basis is the metrological service of the Republic of Uzbekistan, which consists of the metrological service of the state and courts. Regulatory - legal bases - relevant republican laws, state standards, state and industry regulatory documents [5].

Metrological supply sets specific goals. The most important of these are: product production, improving its quality and efficiency; ensure interchangeability of details and aggregates; ensuring the reliability of accounting of material wealth and energy resources, environmental protection, health care, etc. [6].

The level of metrological supply directly affects the quality of the product. In order to further increase the efficiency of this effect, special importance is given to metrological preventive works and issues of metrological maintenance in production preparation. Importance of metrological law. One of the most important aspects of the Law of the Republic "On Metrology" is the prevention of the following situations, the use of unreliable measuring devices or methods is the cause of the derailment of technological processes. in addition, energy resources may be used unnecessarily, accidents and defective products may occur; high costs for obtaining reliable results of measurements, changes in economic management lead to external national changes in metrology. And finally, this law strengthens the legal foundations of international cooperation in the field of metrology, creates a suitable ground for the following actions: support of obligations under international agreements in a separate agreement, further increase the reputation of the National Metrology Center of Uzbekistan in international organizations [7]. Creating conditions for tests, comparisons and calibration to eliminate various technical obstacles in bilateral and multilateral foreign economic relations. A

special feature of the legal status of the state metrological service is that all metrological services are vertically subordinated to one court, the Technical Regulatory Agency of Uzbekistan. The Law "On Metrology" pays special attention to the legal responsibility of those who violate metrological norms and rules and do not comply with them. This is relevant for all legal entities and individuals who communicate with metrological norms and rules during their activities. The main goal of the international metrology regulatory organization is to coordinate the activities of state metrology services and other national institutions at the international level. The main directions of activity of the legislative international organization are the determination of methodological and architectural metrological descriptions of measuring instruments for countries, the harmonization of measurement equipment, comparison methods, benchmarks and attestation of standard and working measuring instruments, the adoption of internationally unified measurement units in countries to ensure its use, to develop the most convenient forms of metrological services and to ensure the unity of the state instructions on their introduction, to provide scientific and technical assistance in the provision of metrological works in developed countries and to provide them with the necessary technical means , defining uniform rules for training personnel at different levels in the field of metrology [8]. Methods and types of measurements. The numerical value of a quantity can usually be found only by the act of measurement, that is, it is determined how many times the amount of this quantity is greater or smaller than the quantity of this type, which is taken as equal to one. "Measurement" refers to the process of perception, determination, and comparison, in which the quantity to be measured is compared with the amount perceived as a unit of the same type during the physical experience, that is, the experiment. In this definition, it is possible to conclude that: firstly, measurement is the creation of information about various quantities, secondly, it is a physical experiment, and thirdly, the measurement unit of the measured quantity is used in the process of measurement. Therefore, the purpose

of measurement is to find the ratio of the difference between the quantity being measured and the quantity accepted as a unit of measurement. That is, the sought-after quantity in the measurement process is such a basic quantity that its determination is the task and purpose of the entire research and inspection, and the object of measurement is involved. The object of measurement is such an auxiliary quantity, with the help of which the main sought-after quantity is determined, and it is such a device, with the help of which the measured quantity is compared. Thus, it is necessary to distinguish three concepts from each other: measurement, measurement process, measurement method. Measurement generally means receiving and changing information about various quantities. The purpose of this is to determine the numerical value of the sought quantity in a form convenient for use. The process of measurement is the process of conducting a comparison experiment. The measurement method is a physical experiment that is carried out with the help of a specific, known structure, measurement tools and a specific way of conducting the experiment, an algorithm, a method of implementation.

In conculusion, measurement usually begins with determining the purpose of measurement, and then, based on the analysis of the description of this quantity, the object of direct measurement is determined. With the help of the measurement process, information about the object of measurement is generated, and finally, by some mathematical processing, the result of the measurement is obtained about the purpose of the measurement or about the sought quantity.

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