



CONDITIONS FOR CARRYING OUT THE METROLOGICAL EXPERTISE OF REGULATORY AND TECHNICAL DOCUMENTATION AND THEIR ASSESSMENT IN THE CONDITIONS OF UZBEKISTAN

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In this article in the normative base of documents includes state standards, international (regional) standards, recommendations containing norms and requirements for ensuring the uniformity of measurements and determining the procedure for conducting metrological examination.

KEY WORDS: *rules, standardization, functioning, economy, health care, authorities*-----

INTRODUCTION

The regulatory framework is a kind of foundation for which is the work of the expert. A regulatory framework means a list of rules, norms and laws that an expert should be guided by when conducting a ME [1,2].

For successful work in Uzbekistan, an expert metrologist uses three main tools as in other CIS countries:

- Regulatory framework;
- Reference information (reference and information fund);
- own practical experience.

The second main tool in the work of an expert-metrologist is a reference and information fund, which includes various lists, catalogs and technical descriptions of measuring instruments, measurement techniques, technical literature, textbooks and periodicals on metrology, information materials on the parameters of raw materials, components, accuracy and performance indicators of technological equipment [3,4].

The third main tool of an expert metrologist - his own experience of working with measuring instruments in carrying out measurements, verification and calibration. It is impossible to carry out a metrological examination professionally without one's own practice of carrying out measurements. With concepts like "SI sensitivity", "working part of the scale", "instability of readings", "zero offset", "transient characteristics", "electromagnetic compatibility", "resolution" etc., an expert metrologist should be familiar not by hearsay, but practically. Only in this case he can speak with the developer of technical documentation in the same language [5].

Very high requirements are imposed on an expert metrologist, and only persons who have undergone special training and are licensed are allowed to carry out a metrological examination. The rights and obligations of an expert are established in his job descriptions and must be fixed in the STO on the conduct of a metrological examination.

METHODOLOGY

An expert conducting a metrological examination of regulatory and technical documentation has the right to: - return the documentation to the developer without consideration in cases of violation of the completeness or lack of mandatory signatures; - demand clarifications and additional materials from the developers of the documentation on issues arising during the examination; - make proposals for improving technical solutions in terms of metrological support; - make proposals to amend the documentation in the part not related to the violation of existing standards and normative and technical documents, subject to their agreement with the developer of the



documentation; - demand the correction of errors and violations of metrological rules and norms, if necessary, return the documentation for revision [7].

The expert's remarks related to the violation of current standards and other regulatory documents are mandatory.

An expert conducting a metrological examination of normative and technical documentation must: - be guided by the current state standards and other normative documents governing metrological rules and norms; - know the tasks of metrological expertise, have the skills to solve them, be able to highlight priority issues when considering specific documentation, know and use the basic metrological rules, current metrological normative and methodological documents; - to provide assistance in the development of technical solutions for metrological support; - keep records of shortcomings, comments and suggestions for subsequent generalization and development of recommendations for their elimination; - sign documents that have passed the metrological examination.

Disagreements between the developer and the expert are resolved by the technical manager of the organization (enterprise). If necessary, disagreements based on the results of a metrological examination can be resolved by a higher metrological authority. Responsibility for the completeness and timeliness of submission of documentation for metrological expertise rests with the heads of departments - documentation developers. The chief metrologist of the organization (enterprise) is responsible for the complete and high-quality performance of the metrological examination. The decisions of the head of the metrological department on the requirements of current standards or other regulatory and technical documents in terms of metrology are final.

RESULTS

Controlled (measured) parameters are determined by the initial regulatory documents for products, technology, control systems or other objects. When analyzing the optimality of the nomenclature of measured parameters, attention is paid to the clarity of the indications about the measured value. Uncertainty in the interpretation of the quantity to be measured can lead to large unaccounted for measurement errors. The redundancy of the measured parameters is also revealed, which may result in unjustified costs for measurements and metrological maintenance of measuring instruments.

To assess the optimality of the nomenclature of measured parameters, the following steps should be performed: - check the sufficiency or redundancy of the monitored parameters, the possibility of mutual exclusion, replacement of “qualitative” parameters with “quantitative” ones; - to determine the parameters that can not be measured, but limited to their indication or not controlled at all; - to ensure that the range of measured parameters and their norms comply with the requirements of current standards and regulatory documents; - to determine the economic feasibility of the selected range of measured parameters.

In the standard (regulations, technical conditions, etc.) characteristics are established for the product, and the controlled parameters are indicated in the section of control methods. If there are no such initial requirements, then when analyzing the optimality of the nomenclature of controlled parameters, the following provisions are guided.

1. For finished products, it is necessary to ensure control of the main characteristics that determine the quality of products, and in continuous production also the quantity of products.
2. For technological equipment, monitoring and control systems of technological processes, it is necessary to carry out measurements of parameters that determine safety, optimality of the mode in terms of productivity and efficiency, environmental protection from harmful emissions and effluents.

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