

# ESSENTIAL FUNCTIONS OF THE STANDARDIZATION, PRINCIPLES AND METHODS

## ОСНОВНИ ФУНКЦИИ НА СТАНДАРТИЗАЦИЯТА ПРИНЦИПИ И МЕТОДИ

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**Abstract:** *The standardization is a specific activity, which obeys principles, has its own methods, can take different forms and has objects with diverse character. The standardization activity includes the developing, approving, issuing and the application of the standards processes. In this article have been examined the standardization's main formulations and methods at international, regional, national and company level. Therefore the generally acknowledged, basic principles and rules for work of the standardization are being respected. The standards are being developed and published in the society interest and represent mean of information and mutual understanding between partners.*

**KEYWORDS:** STANDARDIZATION, PRINCIPLES, METHODS

### 1. Introduction

The standardization is an activity which determines prescriptions for common and repetitive application, concerning actual or possible problems, through which an optimal order is being achieved in a given combination of circumstances. The standard is a document, specifying the qualitative and quantitative characteristic of the product of a concrete work. Each standard has to be economically well-founded and to determine the end result, which results from the improving the product quality, in accordance with the manufacturing expenses. If the positive effect exceeds the expenses, the production is effective and the standard is economically well-founded [2].

The standard as a normative reference of the production's consumer value is a reflection of the complex interrelations between production and consumption. The technical side of the standard is directly related to the production and technical progress, from which the growth of technical level and quality of the consumer value of the product largely depend. All technical indicators of the standard require, however, economic forecasting. The standard is a basic document, which concentrates the information about the quality of the product and its custom properties.

Types of standards and objects of standardization.

The standards are divided into types depending on the level at which are being developed. Level of standardization-this is a form of participation in the activities of the standardization, taking into account the geographic and economic scope.

-International – can engage the relevant authorities on all sides. ISO, IEC. They are being designated as: ISO, IEC or ISO/IEC. They are valid for members of these organizations.

-Regional – engages regional bodies of the parties just from one geographical, political or economic region of the world. They are being developed by CEN/CENELEC and are valid for members of these organizations. They are indicated as EN, ENV (draft European standard), HD (harmonized) document.

-National-performed at the level of an individual country. Developed by specialized structures in their respective countries and are valid within these countries. They can be indicated differently: Bulgarian-BDS (BDS), German – DIN, British- BS, French- AFNOR, American – ANSI[2].

-Territorial (Industry) standards – it must be done at the level of the territorial unit of a country or a specific area (industry sector) of the standard-setting activities; standards for a specific industry or sector, developed by relevant industry standards organizations and are valid for the given industry.

-Company-developed by separate companies and are valid for the products and/or services of an individual company, creating different types of corporate standards, which shall be issued within the company and must be implemented by the business units of the company.

### 2. The importance of standardization

Implementation in practice of basic scientific and technological achievements in order to satisfy the need for high-quality goods and assistance for the production and development of the assortment according to the trends and possibilities of the economy;

-Assist in rapid renewal of production;  
-Support the development of specialization, cooperation and concentration of production;  
-Assists the country's effective participation in the international division of labor;

Through standardization the technical mistakes in international trade are being removed (harmonization with international standards);

-Ensure the full use of raw materials, energy and fuel.

### 3. Goals of the standardization:

-Improvement of the quality of goods and services and their compliance with their intended purpose;  
-Improving the quality of life (reliability, substitutability, amenities, accordance to purpose, health, environment, safety);  
-Improve the efficient use of resources (single base for products);  
-Improved trading conditions (obvious technical criteria for legal purposes).

### 4. Sub goals of the standardization:

Management of the diversity;  
-Management of the usability and compatibility;  
-Management of health and safety;  
-Environmental protection;  
-Achieve mutual understanding;  
-Improving economic indicators;  
-Stimulation of external and internal trade through the removal of technical barriers.

### 5. Principles of the standardization

Based on them are all standards. On the basis of the legal provisions, the current laws are creating basic principles on which the standards are built. The basic principles of standardization are:

-Inclusiveness – have application in all spheres, directions and levels of the economy and social life of the people; [1]

-Systematization – perform the activity by creating consistency, complexity, dynamism, systematic approach of the raw materials to the finished product;

-General Agreement – compliance with the interests of consumers, manufacturers, suppliers and takes place for the general benefit, and with participation of all countries;

-Dynamic – the standards are updated periodically, update and comply with the latest scientific developments in the field of research;

-Progressiveness and science – the projects of the standards should reflect the latest achievements of science, technique and practice;

-Perceptiveness – must take account of the future development of production and future development of needs;

-Unity and lack of contradiction — the text of all categories of standards should contain single, accurate and unambiguous information (not contradictory);

-Clarity and brevity – the rules, the terms and definitions contained in the standards must be clearly and concisely formulated and specifically mentioned;

-Voluntary – the standards are voluntary for application in Bulgaria almost at all levels of standardization. This principle allows overcoming the technical barriers to trade, and is the basis for voluntary testing and certification of products and systems. In case of need at different levels of standardization, the standards could become compulsory (for example in dangerous products for human health);

-Publicity – all projects of international, regional and national standards are available for discussion;

-Equal treatment – the standardization activity is implemented in the technical committees in which all stakeholders participate voluntarily.

## 6. Methods of standardization

Basic methods: systematization; mutuality; simplifying; typing; unification and others.

-Systematization – allocation of a multitude of objects in separate classes, according to each class attribute and their arrangement in a certain sequence. A typical example are the classified systems (circuits) [1].

-Mutuality – expressed in the purchase or exchange of an already created or standardized objects.

-Simplification - is the "simplification" of the versions or simply cutting them out. [3]

-Typing – differentiation of distinct types (types) similar objects defined through selection, according to the essential common features.

-Unification- creates uniformity through the elimination of unjustified differences, i.e. minimization of diversity to an optimal number of sophisticated components.

## 7. Key features of standardization:

Economic function – it allows stakeholders to obtain accurate product information in an accurate, clear and comfortable form. At the conclusion of the contract, a description of a standard replaces the description of the product and obliges the supplier to comply with these requirements, and to confirm them. It occurs more in the field of innovation through the analysis of the international and progressive standards.

Standardization of the test methods play an important role in assessing the competitiveness of the products, since they receive comparable characteristics of the products. The standardization of the processes allows for refinement of the technology, improving the quality and management of technological processes.

Social function – requires striving for inclusion in standards and reaching in the manufacture of such indicators for the quality of the object of standardization, which help to enhance the healthcare, hygienic-sanitary norms, safety of use and environmental performance of the product.

Communicative function – it is related to achieving mutual understanding in society through exchange of information, common terms and definitions, common standards concepts and symbols, uniform requirements for standards and clearance of documentation. Everything is standardized.

## Conclusion

Standardization is an activity that in its essence always leads to enhancement of the quality of the products. The activity of standardization is aimed at optimizing the phenomena and processes as well as their arrangement in accordance with certain rules.

The object of standardization is the products, processes and services. In all international standards these three objects of the standard-setting activity are made jointly.

When standard-setting activity takes place in a certain area and for a given product, the issues related to its characteristic, the procedure for revision, the functions carried out, assembly, packaging, labeling and storage are being covered. The main activity of standardization is the preparation of standards in the service of society.

## Literature

[1] Sandalski PCs., international and European standardization, SOFTTREJD, c, 2002.

[2] <http://www.bds-bg.org/>

[3] Sandalski Br., Sandalski M., Vicheva M., I. Burov, Mitewa R., "Free Movement and technical competitiveness of products in the European Union", Sofia, 2011.