

polymer melt and facilitate the dispersion of the filler. Plasticizers also improve the technological properties of the material, such as flowability and processability, which is particularly important when producing products by extrusion or injection molding [2].

Additionally, to achieve optimal properties in composites, it is essential to carefully control mixing process parameters such as temperature, time, and mixing speed. This helps minimize agglomeration and ensures uniform distribution of the filler in the polymer matrix.

An important aspect is also the selection of bentonite type and its preliminary treatment. For example, using purified and activated bentonite can enhance its interaction with the polymer matrix and increase the effectiveness of modification. In conclusion, it can be noted that composites based on layered silicates and polymer materials have significant potential for application in various fields such as packaging, automotive engineering, construction, and electronics. However, to realize this potential, it is necessary to solve a number of technological challenges related to improving component compatibility, optimizing mixing processes, and using modifying additives. Further research in this area will allow for the development of new materials with improved properties and expand their practical applications.

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УДК 006.01

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THE EFFECTIVENESS OF STANDARDIZATION, TECHNICAL REGULATION AND CERTIFICATION

Standardization plays a very essential role as it affects all spheres of human life and ensures the efficiency of economic, financial and production processes. The constant expansion of international trade and the need for closer cooperation in science and technology led to the founding of the International

Association for Standardization. The range of standardization objects is quite wide, as a result, standards are a technical language in which specialists speak and understand each other.

Quality - a set of properties and characteristics of a product that gives it the ability to satisfy conditioned or implied needs.

Quality assurance is a set of planned and systematically carried out activities necessary to create confidence that the product meets certain quality requirements. An important role is given to the appearance, organoleptic characteristics, packaging, information for the consumer about the quality and direction of use of the product.

A standard is a document, established by consensus and approved by a recognized body, that provides for common and repeated use, rules, guidelines or characteristics for activities or their results.

Harmonization - prevention or elimination of differences in the technical content of standards having the same scope. Harmonization looks at differences between process standard, and sets bounds to the degree of their variation. It makes the trade-off between too many and too few process standards and avoids inconsistencies between standards.

States with well-developed technical regulation system have the appropriate level of competitiveness on the world market. According to the European Committee for Standardization, all products produced at the enterprises of the EU meet the standards. The value of certification is reflected in the degree of public trust and confidence, which are provided by an impartial and competent assessment by a third party.

For the successful implementation of its duties certification bodies in each country must be accredited. Germany can be accepted as a country with the most prominent example of successful organization of the national standardization system.

The system of technical regulation of products in the UK is very similar to the German and is considered as one of the oldest in Europe.

In the near future, certification will develop in the following area: Improvement of certification methods and schemes, convergence of certification schemes with European ones. Increasing the variety of schemes will allow the applicant to choose the most acceptable of them, both from the point of view of costs and taking into account the degree of danger of the product, the volume and nature of its production, circulation and use.

One of the main tasks of the ongoing work on standardization is to update and harmonize the requirements of national standards with the requirements of

international ISO standards and standards of industrialized countries. This will ensure the quality of products in accordance with the level of development of science and technology, international experience.

Actively taking part in standardization brings many advantages for companies of all sizes. Standards help clarify product characteristics and promote cooperation among market participants.

Advantages from standardization, beyond direct cost and quality improvements, include

- The process becomes more reliable;
- Less expenses in development of innovative new practices, and less expenses in the administration of processes;
- Comparing the performance between different units of an organization becomes easier.

Criteria for Standardization illustrates two rules:

- Decisions about standardization are process-specific.
- A precondition for any process standardization is that the requirements for processes are sufficiently similar.

Process performance is quantified in terms of reaching process objectives. Process objectives are derived from the objectives of the respective process chain. In some cases the individual process improves, while other processes in the same value chain suffer. Therefore, the performance difference needs to be measured on the level of the end-to-end process.

Summing up, standardization is a guarantee of profitable, legitimate and productive relationships between economic entities. Standardization and harmonization can greatly improve process performance, lower the costs for process maintenance, and give senior management more control over the operations.

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