ISSN 2181-8622

Manufacturing technology problems

Scientific and Technical Journal Namangan Institute of Engineering and Technology

INDEX COPERNICUS INTERNATIONAL

Volume 9
Issue 2
2024

Google Scholar Crossref doi SLIB.UZ Scientific library of Uzbekistan

METHODOLOGICAL PROCESSING OF QUALITY CONTROL OF TECHNOLOGICAL PROCESSES OF MANUFACTURING ENTERPRISES

KHOLBOYEVA SHOKHSANAM

Doctoral student of Namangan Institute of Engineering and Technology, Namangan, Uzbekistan
Phone: (0894) 309-7771, E-mail: xolboyevas@bk.ru
*Corresponding author.

KOSIMOV AHTAM

Associate professor of Namangan Institute of Engineering and Technology, Namangan, Uzbekistan
Phone: (0893) 938-3003, E-mail: axtamqosimov@gmail.com

Abstract: In this article, the creation of a market-oriented quality management system, the development of the internal and external environment of the market-oriented quality management system, the tolerance system for the change of the actual values of quality indicators during the production process without significantly affecting the technical level of quality regulation of possible limits, a comprehensive standardization system is about defining the program and regulating all processes of quality management.

Keywords: product quality, quality management system, market demand, production process, raw materials, material resources, product quality management.

Introduction. Product quality is the most important component that determines its competitiveness. To create a market-oriented quality management system, we consider its external and internal environment. Four groups of factors should be distinguished in the external environment of the market-oriented quality management system. The first group of factors is represented by buyers. They are a source of information about quality violations. Their most important role in the quality management system is manifested in the timely delivery of information about quality violations to the supplier, involvement in the process of creating a high-quality product. The buyer must convey his needs to the manufacturer as a source of requirements. But these needs, which are often absent in textile enterprises, should also interest the manufacturer. In fact, our products were produced according to the plan, not what the consumer needed, and not because the customer needed it, but because it was convenient for the company. This is contrary to one of the basic requirements of TQM, which recognizes only the production of products that are needed by the consumer. The quick reaction of the enterprise to satisfy the customer's requests is determined in advance by the technology of receiving and processing information from the customer, on the one hand, and information about the situation and capabilities of the customer, on the other hand. technological process of meeting these requirements. Ultimately, the effectiveness of the market-oriented quality management system is determined by the status and availability of information about the technological process and its organization.

Methodology & empirical analysis. A market-oriented quality management system is based on developed cooperation with suppliers of raw materials and other

material resources - this is the second group of factors. In the conditions of administrative-command production management, the enterprise was forced to produce not only what is needed in the market and what is necessary to achieve high quality, but what is possible in this enterprise. Thus, a situation was created where low quality was already inherent in the capabilities of suppliers. To strengthen cooperation, there are many ways to increase the interest of suppliers in the quality of their products: these are long-term contracts that help to achieve more confidence in the work of suppliers, special bonuses for high-quality products.

The third group is post-production service, the content of which mainly determines the nature of the interaction between textile enterprises and customers, through which information about the needs of customers and direct and hidden defects identified by customers is taken. Such data must be collected, compiled and analyzed by the manufacturer.

The most important factor of the external environment is competitors - the fourth group of factors. They have a decisive influence on the quality management system. The economic interests of the enterprise are realized through the level of costs for quality assurance. The quality cost problem has a number of unresolved issues related to cost control methods. Technical, technological, organizational and economic factors should be taken into account in order to choose a policy that is beneficial for the enterprise on regulating the costs of quality assurance.

affects the interests of both the producer and the consumer of the product. The system of ISO and TQM standards ensures the need to estimate the costs of product quality assurance. At the same time, the practical implementation of this requirement requires a detailed study of the problem in connection with the organizational and technological conditions of textile production. The problem of managing the cost of quality assurance itself is a set of interrelated elements, for example:

- people (experts from various departments responsible for providing cost information and calculating them);
- structure (definition and mutual relations of cost accounting departments; organization of document circulation);
- the goals of quality cost management (a means of achieving the goal);
- technology (methodology of cost accounting, analysis and optimization), which is aimed at achieving the general goal of quality cost management - optimizing them and determining the economic effectiveness of quality improvement measures.

principles are based on the implementation of interrelated management functions:

– planning the implementation and organization of the cost management subsystem;
– motivating employees to optimize costs to ensure quality;
– regulation and control of the activities of personnel in the management of security restrictions.

If the production processes are designed to achieve the highest quality products, they must ensure that the developed parameters are met, that the workers follow the job

descriptions and comply with the regulations, but also fulfill the documentation requirements to ensure the correct production. should be monitored to ensure

Consider the internal environment of a market-oriented quality management system.

The main requirement for the subsystem of the quality management of the technological process is the clear formulation of goals at all levels of management and the stages of quality formation and the connection of all contours of the quality management system. The goal is set in the language of quality standards and key indicator values. The system of quality standards is the normative basis of process management. The regulatory framework of the quality system consists of subsystems: the framework of criteria, the tolerance system, the comprehensive standardization system and the system of regulatory and technical documents (NTD system).

The criterion is a system of parameters that determine the goals at all levels and stages of the formation of the quality of basic textile products. According to the recommendations, it includes the requirements of technical conditions and regulations, various quality indicators and accuracy measures (accuracy criteria).

The tolerance system regulates the limits within which the actual values of quality indicators can change during the production process without significantly affecting the technical level of quality.

A comprehensive standardization system defines the program and regulates all quality management processes. Standards define quality standards: existing and progressive (advanced standardization), requirements for measurement, evaluation and quality control procedures, perform a coordinating role, coordinate quality requirements for various materials, products, technical devices, quality planning regulates the procedure (step standards) and ensures consistency in the measurement and evaluation methods of design and development processes

Normative-technical documents (NTD) as a subsystem include standards, methods, instructions, and the regulatory framework that ensures the interdependence and continuity of all quality management processes through relevant quality indicators. is a special "memory".

The regulatory framework of process quality management includes:

- system of technological parameters;
- consumer requirements for the product;
- complex standardization system;
- normative literature;
- tolerance system for physical and mechanical parameters;
- advanced standardization, GOST s, technical conditions, instructions

the most important component of the market environment

focused quality management system - organization of achieving these goals - technically based methods of order production on time. It is the COMFORT component of the system that determines the reality and effectiveness of the work. Organization of achieving goals includes several functions.

- separation and cooperation in monitoring process parameters;
- established rules for the distribution of authority and responsibility for the status of technological process parameters and monitoring of the values of these parameters.

Feedback in the internal environment of the market-oriented quality management system is carried out with the function of taking into account the costs of quality assurance that arise in product design, evaluating quality parameters during product production and implementing measures to achieve it. standard values of these parameters, as well as those associated with losses when the required quality is not achieved.

As can be seen from the above description, it is necessary to rely on process and system approaches in the development of a market-oriented quality management system.

The process approach is based on the premise that if interrelated activities and resources are considered as a single process, the expected result will be achieved more efficiently.

A systematic approach to quality management is implemented by identifying, selecting and organizing interrelated processes based on objectively existing relationships in the single information space of the technological process. achieve the end result with maximum efficiency.

In our work, the product quality management system is considered as an active activity of the company's employees, their powers and responsibilities are determined by their place (role) in the organizational structure, and it is ensured that they perform the necessary activities within the framework of the regulatory documents established by them. documented information and aimed at meeting customer (consumer) requirements. It is objectively necessary that the goals and tasks in the field of product quality be at the center of the enterprise's economic, technical, product and commercial policy.

Results. The market-oriented quality management system significantly expands the existing understanding of the structure and functions of the quality system, which is implemented in the following rules.

First, the focus is on the customer. The existence of a business depends on the number and quality of its customers, and therefore it must fully understand the current and future needs of its customers, meet their needs and strive to exceed their expectations. Therefore, the structure of the process management system should ensure (contribute to) the implementation of the enterprise's mission.

Secondly, the most important role is played by the company's employees. Unity of purpose and development of the enterprise is ensured by its leaders. They must create and maintain an internal environment in which employees are fully involved in the process of achieving the company's goals, which can be ensured by a work organization process that has the necessary conditions for cost and time effects.

Thirdly, involve all employees of the enterprise in the problem of product quality. The innovative potential of the enterprise is created by its employees at all levels, their

full involvement in economic processes ensures the maximum use of their capabilities for the benefit of the enterprise due to operational and technological cooperation of labor, integration of several works. single job task, release employee initiative, reduce inspection and control, minimize approvals.

Fourthly, to develop and implement cost management subsystems to ensure product quality, their goals are as follows: to identify priorities for improving product quality (reducing the cost of defects); reducing the level of defects (increasing product quality); reduce the causes of consumer dissatisfaction; reduce overall production costs; cost optimization for quality assurance; it is impossible to identify problems in the field of quality assurance without knowing the level and structure of costs.

Based on the standard requirements of the market-oriented management system, the methodological bases of the labor organization process in product quality management are as follows:

1. Acceptance and identification: A standard process for product acceptance and identification should be established. This process includes checking the quality of the product, recording the previously received information and providing information to the recipient.

2. Short-term inspections: Products must undergo short-term inspections during operation. In such inspections, information on the chemical, physical and functional properties of the product is collected, and based on the determination of actions on the expected results, successful products are ensured.

3. Analysis and analysis: To products always analysis and analysis to do important In this process delivered giving of materials and of components quality of the product to consumers present to be done during to be possible has been disadvantages and mistakes to determine movement will be done.

4. Certification and to standards Liability: Products certification from the system transition, quality standards suitable arrival, Above characteristics looking defined to standards liability to show need

5. Employees Education: Product in management the public strengthen in order to employees education, news diary subscription and practice knowledge more increase process done increase necessary

6. Opportunity and resources successful management: of the product quality in management, successful activity provide for necessary resources (material, personnel, technology and another resources) done increase necessary

It is methodical the basics done increase through, to market directed management system standard requirements according to product quality discussion to do and his to consumers good present to reach provides.

Conclusion. In short, a market-oriented quality management system (that is, the organization of the production of competitive products in the conditions of the formation of a market economy) requires solving the following problems:

- justification of technological process quality management system structures;
- development of methodological support for the organization of a technological

group to manage the technological process;

- justification of the content and content of documented information for process control;
- development of a cost management system for quality assurance.

References

1. Yurtaev EA Development of a system of collective contracts in textile enterprises, the author. ref. Ph.D. Moscow 1990.

2. Ivashchenko NM Development of the organizational and methodological foundations of the management system of collective forms of labor organization and promotion in the context of the development of market relations (on the example of wool industry enterprises of Ukraine), the author. Abstract, Moscow, 1990.

3. Taver EI Control object in quality management. / / Standards and quality, - 200). - No. 2. - B.

4. Leonov IG, Aristov OV Product quality management: a textbook, M/standard publishing house, 1986.

5. Qosimov A., Kholboyeva S. History of health and safety of textiles industry //Science and innovation. – 2023. – T. 2. – №. D12. – C. 445-448.

6. Qosimov A. A. Prospects for improving product quality in textile industry enterprises based on quality policy systems. 2022. – T. 2. – №. D11. – C. 145-148.

7. General quality management/, textbook for universities/ OP Gludkin, NM Gorbunov, K.V. Zorin; edited by O.11. Gludkina. - M/. Radio and Communication, 1999,

8. Products Made Of Natural Fiber. The American Journal of Engineering and Technology, 2(11), 133-141.

9. Sunadi Sunadi, Humiras Hardi Purba, Sawarni Hasibua. Implementation of Statistical Process Control through PDCA Cycle to Improve Potential Capability Index of Drop Impact Resistance: A Case Study at Aluminum Beverage and Beer Cans Manufacturing Industry in Indonesia. 1335-1745

10. Vi Nguyen, Nam Nguyen, Bastian Schumacher and Thanh Tran. Practical Application of Plan–Do–Check–Act Cycle for Quality Improvement of Sustainable Packaging: A Case Study, 2021, p 1265-1275.

11. The Plan-Do-Check-Act (PDCA) Cycle: A Guide to Continuous Improvement https://pecb.com/article/the-plan-do-check-act-pdca-cycleaguidetocontinuousimprovement.

CONTENTS