

IMPROVEMENT OF PRODUCT QUALITY IN LADDER INDUSTRY ENTERPRISES ON THE BASIS OF STANDARDIZED QUALITY MANAGEMENT SYSTEM REQUIREMENTS

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Abstract

This article investigates the topic of how sawmilling sector businesses' operations are affected by the implementation of a standardized quality management system. The writers conducted scientific research in 2024 to enhance the procedures and quality of goods produced at the Republic of Uzbekistan's currently operating sawmilling firms. Determining the effect of the requirements of the standardized quality management system on the operations of sawmilling sector firms is the primary goal and concern of the research conducted. Our ability to analyze the study questions and determine the following is made possible by the scientific research procedure and the analysis of the data collected: the primary prerequisites for the implementation of standardized quality management system requirements for the production process, statistical analysis of export data, and internal and external factors that aid in improving product quality are for sawmilling industry enterprises to adopt QMSs. The enhancement of foundational procedures and frameworks at sawmilling industry businesses is greatly influenced by standardized quality management systems.

Keywords: SMT, quality, management, enterprise, industry, system, process, improvement, product, improvement, statistical analysis.

Introduction

Businesses that specialize in the initial processing of sawdust and the production of silk goods need to take extra precautions to ensure the quality of their goods. These actions consist of implementing global quality standards, boosting productivity, and applying innovative ideas. Given the application of the standardized quality management system requirements for the export of products produced in our republic and their high retainability in foreign markets, a completely different approach to the current management system of enterprises is required to ensure the quality of products[1-2]. The need for improving standardized quality

management systems is explained by the fact that sawdust initial processing and the production of silk products have drawn the attention of industrial businesses in recent years. The first step in ensuring that high-quality goods that satisfy modern standards are produced is to learn about the roles and responsibilities of the relevant regulatory organizations as well as the procedures and guidelines of the sawmilling industry's businesses. Businesses will thrive if every process inside the quality management system is continuously improved. In the sawmill industry, determining the amount of product required together with taking steps to evaluate, develop, choose, and implement the actual product quality in order to guarantee the desired level of product quality is known as "product quality management." [3].

Methods

Empirical research was carried out by the authors in the first half of 2024 and covered substantive and organizational activities. Twelve open-ended and closed-ended questions made up the questionnaire that was used to perform the investigation. An online survey was used to conduct the survey.

Among the research area's principal subjects are:

- inadequate primary and secondary study on this topic in the country's literature;
- the significance of inclusive customer service in the textile business;
- a description of the markets in Uzbekistan that prioritizes the manufacture of high-quality goods over mass manufacturing;
- an understanding of the connections between quality control and organizational development in the textile sector;
- The research may help the large number of small and medium-sized textile sector organizations decide whether or not to adopt standardized quality management systems.

Literature analysis

Quality management systems have a long history of development and application. A collection of international standards known as ISO 9000 quality management system - services and products was created to assist businesses and organizations in efficiently documenting the components required for the implementation of SMT in quality assurance. This quality management standard can be used in a single setting as well as in all kinds of companies. The ISO 9000 standard assists a company or organization in fulfilling the needs and preferences of its clients, complying with governmental regulations, and improving continuously [5]. Numerous international scientists have conducted research on the topic of enhancing the product quality management system up to this point. The challenges pertaining to methodological and practical matters. They were able to respond to research questions and make the following statements thanks to the research method and analysis of the findings: For textile companies to adopt quality management systems, there must be internal components that facilitate improved customer service and customer management practices. Standardized quality management systems have led to a notable improvement in key procedures in comparatively younger organizations [6].

Furthermore, stated local scientists' Muradova T. The scientific research work "ways to develop quality mechanics in improving the competitiveness of light industrial products," conducted by the company, is led by S. Kadirova, LG and enables the quick development of high- value finished products based on the modernization and diversification of industry, deep processing of local raw material resources, and improving the competitiveness of light. However, it was discovered that the sawmilling industry is not taken into account in enterprises, such as the ongoing enhancement of the enterprise's actions, procedures, and organizational structure while accounting for the unique characteristics of the product quality management system and the sophisticated knowledge of industrialized nations. This was discovered through a study of the activities of the standardized quality management system at sawmilling industry enterprises in accordance with the requirements of international standards, as well as an analysis of the development stages in their development and the modern state of problems and solutions. Consequently, the necessity arose from the fact that they were not in demand.

Results

Nowadays, ISO 9001 is the most widely used Quality Management Standard worldwide, having granted over a million certificates to companies and organizations across 189 nations. The only standard that can be certified within the ISO 9000 family—which includes seven quality management principles such as strong customer attention and continuous improvement—is ISO 9001, though certification is not required [6]. Among the benefits of the company are: customer trust: enables standard firms to build quality control procedures firmly, which raises customer satisfaction and confidence. Efficient customer complaint management: ISO 9001 offers guidelines for efficient customer complaint handling, which helps to solve problems in a timely and satisfactory manner [7]. Process improvement: by identifying and removing inefficiencies, cutting waste, streamlining procedures, and promoting deliberate decision-making, the standard lowers costs and produces better outcomes. Continuous optimization: ISO 9001 encourages regular audits and reviews, which help businesses maintain competitiveness, enhance their quality management systems, and succeed over the long run. The ISO 9001 standard can be used by any company that wishes to enhance customer satisfaction, meet legal and regulatory obligations, and enhance its quality management system [8]. Additionally, the connection or integration of ISO 9001 standards with other standards was examined and finished from four perspectives: premium-based quality frameworks, elements and technique-based connections, principle-based connectivity, and plan-do-check-act (PDCA)-based connectivity [9]. An analysis of a standard principle and the drawing of its link constitute a principle-based connection. This aids in the developer's identification of shared objectives between the two standards [10]. The process of integrating standard elements and assessing their compatibility, similarity, and conflicts is known as element-based connectivity. The establishment of general principles is a link based on the reward viewpoint (i.e., Malcolm Baldrige National Quality Award), while connectivity through the award-based Quality Framework is comparable to principle-based connectivity [11].

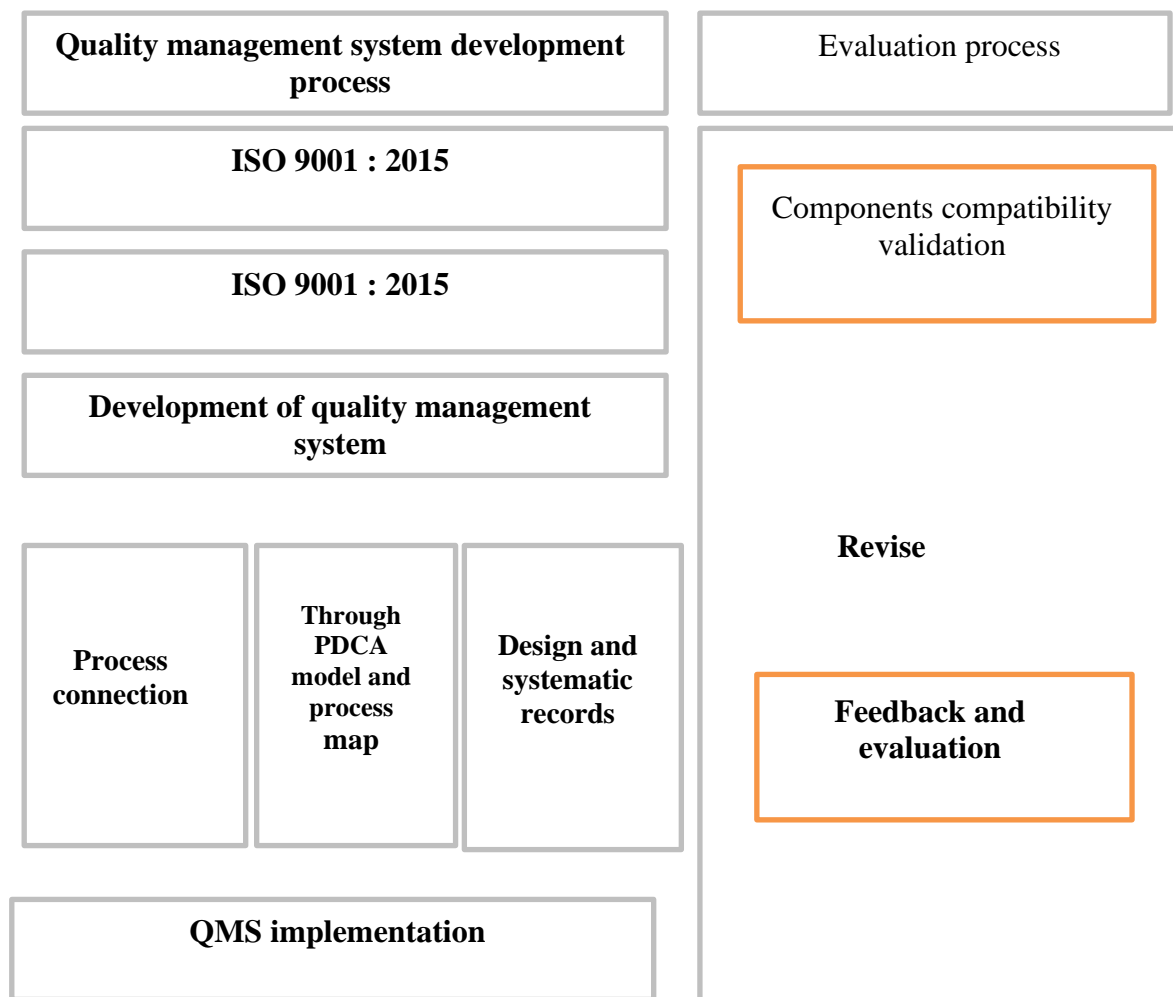


Figure 1. Research results are divided into two types; (1) QMS development process, and (2) evaluation process.

Finally, the principles of the PDCA in ISO 9001 consist of describing the SMT requirements [12] article. In terms of ISO 9001:2015 Smt development, the first two corners were chosen; a principle-based connection to define common goals and an example of a conceptual model using element-based connectivity and pdca connectivity to find similarities and opportunities between these standards.

The statistical reviews obtained indicate that today the introduction of the international standard ISO 9001: 2015 in the enterprises of the silk industry is distributed in the cross section of the regions a follows. When we conduct research, we consider the introduction of ISO 9001: 2015 standard in silk enterprises located in Namangan, Tashkent, Andijan, Bukhara, Jizzakh , Kashkadarya regions.

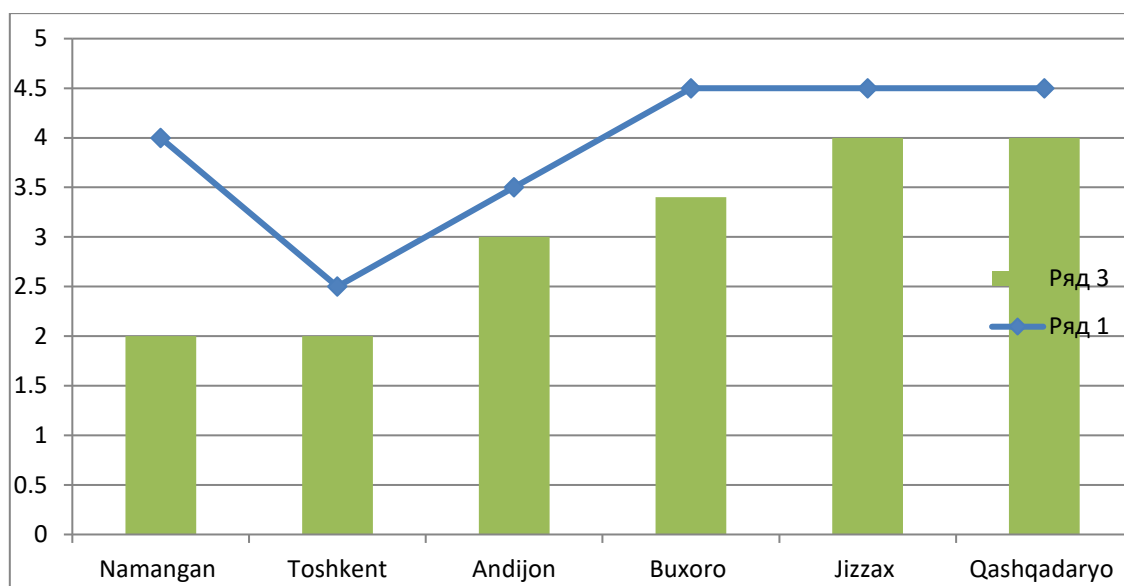


Figure 2. Introduction of quality management system

It is known that enterprises located in Namangan, Tashkent, Andijan have problems with the introduction of the international standard ISO 9001: 2015. However, enterprises located in Bukhara, Jizzakh, Kashkadarya have developed a convenient mechanism for introducing the international standard ISO 9001: 2015. The total number of silk mills located in Namangan is 5, of which the remainder, which introduced 2 enterprises to ATI, did not. The total number of silk workers based in Tashkent is 15, of which the rest who introduced 5 enterprises to ATI did not. The total number of silk mills in Andijan, which is located, was 6, while the rest of them, which introduced 3 enterprises to ATI, did not. The total number of silk mills based in Bukhara was 13, of which the remainder, which introduced 6 enterprises to ATI, did not. The total number of silk enterprises based in Jizakh is 17, of which the rest, which introduced 7 enterprises to ATI, did not introduce. The total number of silk workers based in Kashkadarya is 20, of which the rest who introduced 5 businesses to ATI did not.

Discussion

Towards the conclusion of the study, an effort was made to familiarize and organize the respondents' unstructured thoughts and opinions regarding the operation of the quality management system in textile industry companies. An open-ended inquiry concerning this particular matter was posed to the respondents for this reason. The following results were reached when the responses were analyzed:

- Employee involvement in achieving the goals of the quality policy is positively impacted by the implementation of the requirements of the quality management system.
- A quality management system is a collection of guidelines and practices that help projects and services at all organizational levels be managed for quality at all times.
- Although the solutions provided by quality management systems are helpful and do not deviate from general management guidelines, it is costly to maintain a standardised quality management system.

- Considering that a certificate loses its marketing value, it makes sense to apply the necessary standards without going through the certification procedure.

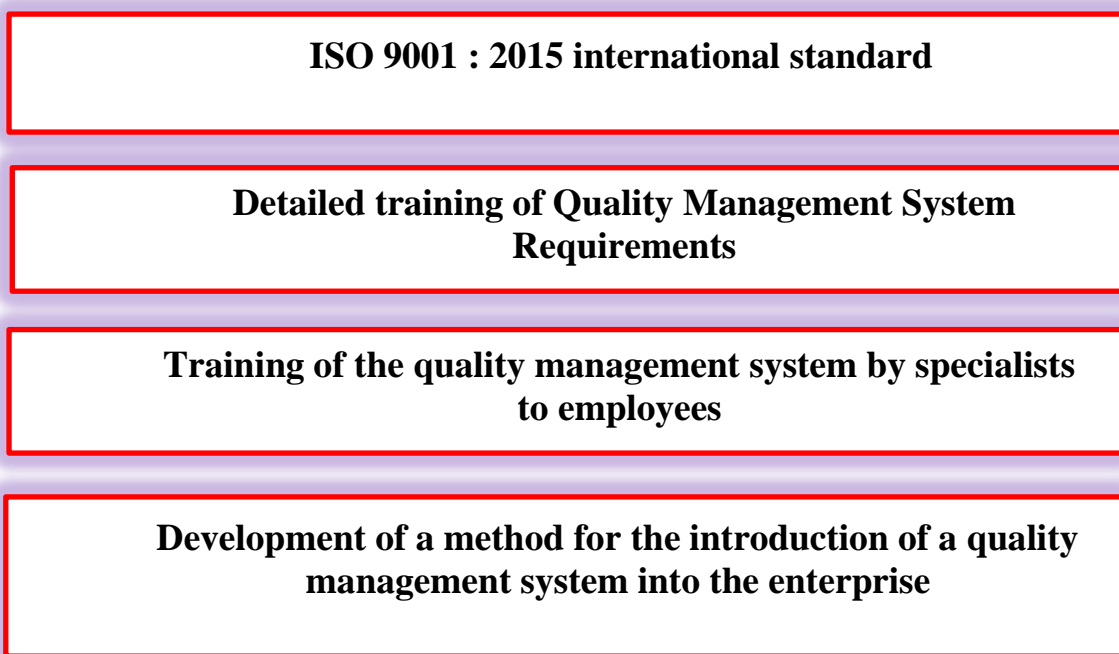


Figure 3. Teaching the implementation of a quality management system

Conclusion

We were able to provide feedback on study questions through the research method and the analysis of the findings, as follows: The use of quality management systems in silk firms is contingent upon several key variables, including internal factors that enhance product quality, statistical analysis, improved customer management processes, and a notable customer impact from standardized QMSs. These systems play a major role in enhancing industry-specific features including customer service, reducing discrepancies, and enhancing communication between supply chain partners and customers. Further inferences on the operation of the quality management system in silk industry enterprises may be made on the basis of the conducted studies. It seems to be a good solution in the context of improving the basic management processes of the introduction of a quality management system by enterprises in the textile industry.

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