

Factors Affecting the Effectiveness of the Rubber Latex Quality Management System in Lai Chau Rubber Joint Stock Company

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Abstract: *The article has a general assessment of the status of rubber latex quality management in Lai Chau Rubber Joint Stock Company. At the same time, the article has a history of surveying employees in the company to assess the factors affecting the effectiveness of the rubber latex quality management system in Lai Chau Rubber Joint Stock Company.*

Keywords: *Quality management system, rubber latex, Lai Chau, Vietnam*

1. Effectiveness of Quality Management System according to ISO 9000 standard

According to ISO 9000: 2007, Quality Management System is a management system to orient and control an organization for quality. In particular, the management system is a set of interrelated or interactive elements to establish policies and objectives and to achieve them. Quality orientation and control includes quality policy making and quality goals, quality planning, quality control, quality assurance, and quality improvement. According to ISO 9000: 2007, the effectiveness of QMS is the relationship between the achieved results and the resources used. Thus, the effectiveness of QMS is the relationship between the results achieved by the operation of the system and the necessary resources used to operate the system.

The achieved results of the Quality Management System are expressed through the level of achieving the quality objectives established at all levels and each functional part of the organization in the short or long term. The necessary resources are used to operate a quality management system including human resources, infrastructure, working environment, finance. The construction and operation of the Quality Management System according to ISO 9000 aims to satisfy the requirements of customers with specific quality objectives clearly defined and oriented to the target year after year higher than the previous year. pushing departments as well as each member of the organization to work hard to achieve their goals, thus promoting the efficiency of each department and organization.

2. Factors affecting the effectiveness of the rubber latex quality management system according to ISO 9000

Based on the principles of quality management and the content required by ISO 9000, the effectiveness of an organization's quality management system depends on the following basic factors:

- The commitment of senior leaders.

Through leadership and concrete actions, senior leaders of the organization create the environment in which all members are mobilized to participate in the organization's management system effectively and effectively. The senior leaders of the organization can use the principles of quality management as a basis to implement their leadership role in the Quality Management System. In order to successfully build and effectively operate a Quality Management System, the senior leader of the organization must take the lead in all quality efforts. Leaders must believe in the philosophy of quality management according to ISO 9000, must commit to long-term organizational quality objectives; From there, direct and participate in developing quality management system as well as take appropriate measures to mobilize active and creative participation of everyone in the organization to achieve the set objectives.

- Participation of members in the organization.

One characteristic of the Quality Management System according to ISO 9000 must be developed in the form of documents and operating on that document. However, if the quality management document system in the organization is completely built but does not guarantee the active participation of everyone, the quality management system does not actually operate; activities and processes are carried out subjectively by the implementers, so it is difficult to control and easily cause the failure to meet the requirements. This effectively reduces the quality management system in the organization. The involvement of employees demonstrates their role and responsibility in complying with the quality management documents of the enterprise, as well as proposing ideas to improve these documents to better ensure Make sure the operation process is done to produce the correct results as required.

- Support of suppliers.

Activities of the organization always need to use resources such as materials, machinery; energy ... The supply of these factors ensures the organization's requirements for quality, quantity and time. The supply will create favorable conditions to conduct production and business activities in a stable manner, from which the organization can ensure to create products that meet the highest requirements of customers.

The cooperation of customers and suppliers is essential and plays an important role for businesses to conduct activities and processes to create products that meet the requirements of customers and stakeholders. center. Providing specific information on product requirements as well as feedback on the quality of products/services received will help businesses understand the requirements of customers and have a basis to proceed. quality improvement to increase customer satisfaction. Besides, the reception of input elements (materials, energy ...) to ensure stability in quality, quantity and clear origin will help businesses ensure stability in the past. Production and business processes as well as easily tracing the origin of products when there are problems to overcome and improve promptly.

- Support of consultants.

The self-construction and application of the quality management system of the organization may encounter some difficulties as it is not objective to assess the situation and compare with the requirements of the standard, taking a lot of time in finding direction and advancing. take steps to build and apply the system. Therefore, the support of qualified and experienced consultants will help to build the quality management system of the organization to shorten the time, save resources and quickly put the system into operation. and exploit the benefits provided by this system.

- Quality management document system.

The system of quality management documents makes it possible to inform intentions and consistency in action (ISO 9000: 2007). The use of a document system helps the organization achieve compliance with customer requirements and quality improvement; provide appropriate training to members of the organization; control the repetition of processes and identify the source of the product easily; provide objective evidence of system operation, as a basis for assessing the effectiveness and relevance of the organization's quality management system. Each organization needs to determine the level of the necessary documentation system and the means of use. This depends on factors such as the size and type of organization, the complexity of the product, the requirements of the customer, the capacity of the staff and the level of need to demonstrate the fulfillment of the requirements of Quality management system. The system of quality management documents is built in a clear, understandable way, reflecting the actual operation of the organization to help employees easily control the quality of work, product quality, thereby ensuring the effectiveness of the operation management system of the operating organization and contributing to improving the efficiency of the system.

3. Scale of factors

The scale of research concepts in the model is built from the theoretical basis and preliminary research qualitative, using the 5-level likert form with 1 completely disagree until 5: completely agree. The scale of leadership's commitment is measured by four observable variables with the content referring to (1) high-level leaders have confidence in benefits; (2) understanding nature; (3) be aware of their important role; and (4) consistently pursue the objectives of ISO 9000 Quality Management System. Middle-level management scales are measured by 4 observed variables with contents such as (1) monitoring; (2) close coordination in process development; (3) exchange information in the process implementation; and (4) receiving proposals for process improvement. The scale of employee participation is measured by 5 observable variables with the content referring to (1) performing the work according to the process; (2) aware of the importance of following the process; (3) understand the process relevant to your work; (4) participate in proposing process improvement; and (5) voluntarily follow the process. The internal information system scale is measured by 4 observable variables with the content: (1) internal information system; (2) timely information of changed documents; (3) information is updated regularly; and (4) members easily get the information they need to do the job. The customer and supplier cooperation scale is measured by 5 observed variables focusing on: (1) customer feedback on the quality of the company's products/services; (2) ensure stable supply of quality; (3) quantity; (4) full documentation of origin; and (5) provide products/services required by the company. The consultant scale is measured by 4 observed variables with the content referring to (1) experience of managing quality management system; (2) understand the company's operations; (3) a deep understanding of quality management system; and (4) have good communication skills. The scale of the quality management document system is measured by 4 observed variables referring to (1) relevance; (2) clear, easy to understand; (3) easy to apply; and (4) easy to control of the QM document system. Finally, the scale of efficiency of the quality management system is measured by 6 observed variables to (1) help the company improve customer satisfaction; (2) rational use of resources; (3) reduce waste; (4) saving time to do the job; (5) achieve quality objectives; and (6) effective of Quality Management System according to ISO 9000. All scales in the model are multidirectional scales.

Research model of factors affecting the effectiveness of the quality management system according to ISO 9000 standards in enterprises is shown as follows:

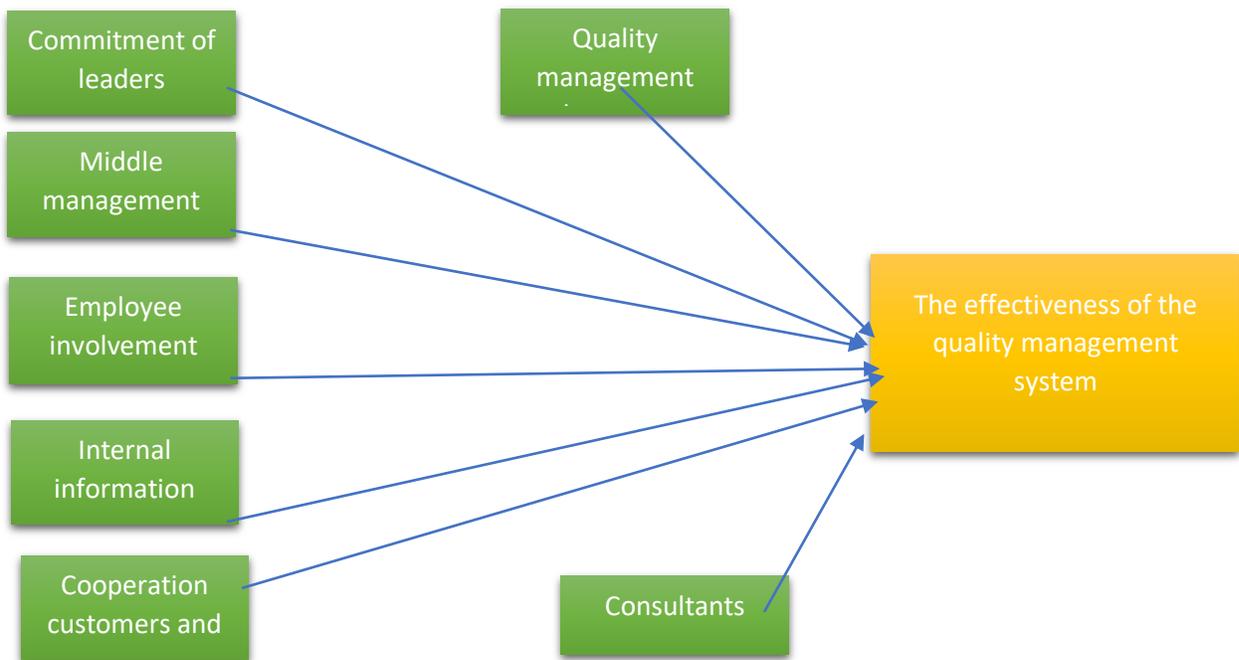


Figure 1. Research model

From the research model, the author proposes research hypotheses as follows:

H1: Leaders' commitment positively affects the effectiveness of the quality management system

H2: Middle-level management role positively affects the effectiveness of the quality management system

H3: Employee involvement positively affects the effectiveness of the quality management system

H4: Internal information system positively affects the effectiveness of the quality management system

H5: The component of cooperation between KH and NCC positively affects the effectiveness of the quality management system

H6: Consultants have a positive impact on the effectiveness of the quality management system

H7: Quality management document system positively affects the effectiveness of the quality management system

4. Sample study

This study uses direct interview techniques with detailed questionnaires with managers and employees working at Lai Chau Rubber Joint Stock Company. The duration of the survey is from January 1, 2019, to May 2019. Samples were selected in a convenient way with a sample size of 220. There were 220 questionnaires issued, 210 coupons were collected, of which 198 votes were eligible to enter data for analysis and treatment. using SPSS software and Smart PLS 3.0 software.

5. Results of analyzing the impact of factors on the effectiveness of the rubber latex quality management system

Preliminary examination of the scale by factor analysis (EFA), the results showed that 6 factors were extracted at the eigenvalue of 1,064, with the variance extracted of 73.47% (> 50%). The scale after EFA accreditation has 25 variables. Middle-level management scale is eliminated (all 4 observed variables). After the 1st Public Security variable of the customer and supplier scale is disqualified, this scale is renamed "Supplier" (NCC), since the remaining variables are related to the supplier only. Verifying the reliability of Cronbach's Alpha for 6 factors, showing that all scales meet the reliability requirement, Cronbach Alpha coefficient reaches from 0.857 to 0.910. Testing scale The effectiveness of the quality management system by EFA analysis extracted 1 factor at eigenvalue of 3,920, with the variance extracted of 65.34% (greater than 50%) satisfactory. Continuing to verify the reliability of the scale shows satisfaction with a reliability of 0.893. With qualified scales, the author put it into analysis by Smart PLS 3.0 software to test the research hypotheses as follows:

Table 1: Construct Reliability and Validity

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
CKLD	0.911	0.911	0.911	0.672
CLNNL	0.928	0.928	0.928	0.682
Document system QLCL	0.838	0.847	0.839	0.637
HTTT NB	0.876	0.883	0.878	0.706
Effective of HTQLCL	0.982	0.983	0.982	0.666
KHNCC	0.910	0.911	0.910	0.629
QLCT	0.898	0.898	0.898	0.638
TGNV	0.872	0.872	0.872	0.694

The table above shows that all factors are satisfactory. The evaluation results of discrimination and convergence are as follows:

Table 2: Discriminant Validity Fornell-Larcker Criterion

	CKLD	CLNNL	Document system QLCL	HTTT NB	Effective of HTQLCL	KHNCC	QLCT	TGNV
CKLD	0.820							
CLNNL	0.188	0.826						
Document system QLCL	0.184	0.222	0.798					
HTTT NB	0.461	0.472	0.207	0.840				
Effective of HTQLCL	0.014	0.015	0.205	0.473	0.816			
KHNCC	0.020	0.030	0.197	0.482	0.040	0.793		
QLCT	0.010	0.026	0.240	0.485	0.036	0.049	0.799	
TGNV	0.067	0.094	0.220	0.444	0.012	0.037	0.022	0.833

The test hypothesis results are as follows:

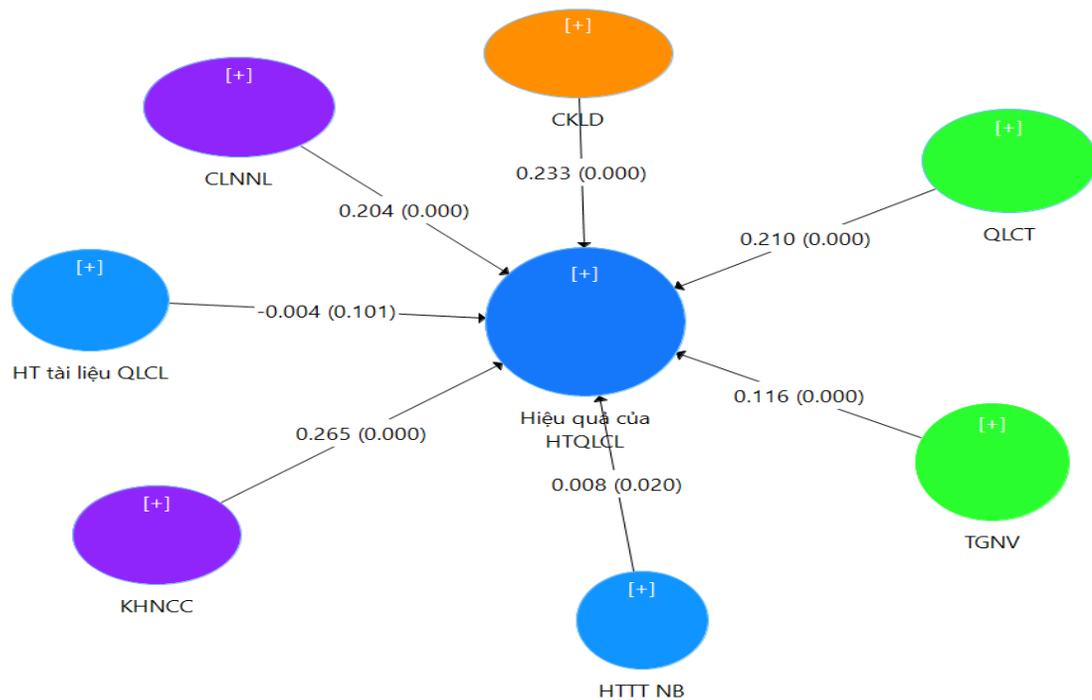


Figure 2.3: Hypothesis test results

Test results show that the factor of the relationship between KH and NCC has the strongest impact on the effectiveness of the quality management system with an impact level of 0.265 at a significant level of 1%. The systematic factor of quality management does not have a statistically significant impact on the effectiveness of the quality management system. The factor HTT NB has the weakest impact on the effectiveness of the Quality Management System at the impact level of 0.008 at the 5% significance level.

6. Conclusion

From the research results, to promote the effectiveness of quality management system according to ISO 9000 standards in enterprises, managers need to focus on the following factors: quality management document system, the commitment of leaders High and employee involvement.

- To ensure that the quality management system of the enterprise effectively operates, the document system must be built in accordance with the business practices of the enterprise; The content of the document must be clear, easy to understand and easy to apply; Each document must have control information to ensure availability, easy access when needed and proper use of documents.

- The commitment of senior leaders of enterprises is a prerequisite for building success and promoting the effectiveness of the quality management system. Whether the improvement of the quality management system of the enterprise is implemented, is it really efficient or not depends very much on the determination to pursue the application of ISO 9000 by the senior management, the receiving senior leaders' awareness of their important role in promoting the application of ISO 9000.

- Staff plays an important role in the operation, improvement proposal and improving the effectiveness of the quality management system. Therefore, enterprises need to train them to have proper awareness about quality management system according to ISO 9000 standards, mobilize their participation through appropriate

encouragement policies both physically and spiritually; assessing employees based on quality and performance, attaching employees' benefits to the benefits of the business; clearly define their responsibilities and powers in their work to encourage their dynamism, creativity and positiveness as well as ensure adequate supply of resources necessary for them to perform well and achieve quality goals set out.

In addition to focusing on the above 3 factors, businesses should also pay attention to the capacity and experience of the consultants in the field of operation of the enterprise when selecting consultants to support the process of developing the quality management system. of the business. This will help the process of building the quality management system of enterprises to shorten the time and quickly bring the quality management system of enterprises into operation and promote the effectiveness of the quality management system of enterprises. In selecting suppliers, enterprises need to build a system of criteria for evaluating suppliers (stability in quality, quantity, time of supply ... at the request of enterprises) and conduct reviews The capacity of the supplier periodically to have a good cooperation of the supplier in ensuring the supply of the inputs of the product creation process of the business in accordance with the requirements of the business, from That facilitates businesses to have the capacity to best meet the increasing requirements of customers.

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