



System of Quality Control of Design and Construction Activities in the Republic of Uzbekistan

Suyunov A.

Professor of Samarkand State Architecture and Construction University

Murodov R.

Master of Samarkand State Architecture and Construction University

ABSTRACT

The article describes the stages of creating a quality control system for design and construction activities in the Republic of Uzbekistan based on a market mechanism. There are also issues of implementation of the state control system for design and construction activities based on the requirements of ISO-9001.

ARTICLE INFO

Article history:

Received 04 Feb 2023

Received in revised form

03 Mar 2023

Accepted 11 Apr 2023

Keywords: defect, marriage, quality, quality indicators, production, ranking, quality management and others.

© 2023 Hosting by Research Parks. All rights reserved.

Introduction. In modern conditions, a large number of legislative acts have been adopted in Uzbekistan, the state regulates the process of development of capital construction in the appropriate legal field, and a wealth of experience has been accumulated in the development of the industry in the context of economic reform[1,2,3]. One of the main directions of ongoing economic reforms in capital construction is the improvement of the system of management and supervision of the quality of design

and construction work, compliance with design, estimate and technological discipline in construction. The creation of a safe environment for the life of the population depends on the professionalism of designers and builders[1].

The regulations governing the supervision of the quality of design and construction work in Uzbekistan are as follows.

In the republic, the formation of an integrated system of management and supervision of the quality of design and construction work, compliance with design, estimate and technological discipline in construction is carried out on the basis of:

- Urban Planning Code of the Republic of Uzbekistan;
- Decree of the Cabinet of Ministers of the Republic of Uzbekistan dated September 17, 2003 No. 404 “On approval of the regulation on the procedure for collecting fines imposed on legal entities for offenses in the field of construction”;
- Decree of the Cabinet of Ministers of the Republic of Uzbekistan dated December 2, 2003 No. 538 “On measures to improve the activities of the State Committee of the Republic of Uzbekistan for Architecture and Construction”.

Content. The system of management and supervision of the quality of design and construction work in Uzbekistan includes:

state expertise of urban planning documentation - carried out by the departments of state expertise of the Ministry of Construction of the Republic of Uzbekistan. in accordance with Article 24 of the Urban Planning Code of the Republic of Uzbekistan;

author's supervision - carried out by the design organization, the developer of project documentation during the entire period of construction;

technical supervision - carried out by the customer during the entire construction period;

state architectural supervision - carried out by the inspections of the SACS of the Ministry of Construction in accordance with Article 25 of the Urban Planning Code of the Republic of Uzbekistan.

These bodies, interacting, must ensure the quality of design and construction products, which ultimately meets both the achievement of the design solutions laid down for the buildings and structures being commissioned, and the safety requirements for their operation.

At the same time, a survey of construction contractors shows the existence of serious problems[2, 3]:

1. Extremely low quality of project documentation. This was indicated by 56% of the respondents. 33% of respondents testify that there are deviations from construction supervision in project documents. At the same time, in more than 30% of cases, design organizations refuse to agree with the comments of construction contractors.

2. Carrying out technical supervision is actually reduced to the formal presence of the customer's representative at the facility. The current regulatory documents do not establish a clear degree of responsibility of technical supervision employees for the violations committed in their work.

Often, specialists without a certain skill and work experience, with a low technical level of knowledge, are involved in the technical control group. There is practically no system for advanced training and certification of technical supervision workers.

Improvement also requires the organization of architectural and construction supervision of construction by the bodies of the SACS.

Taking into account the continuous nature of construction work, it can be stated that with the existing density of inspections, not all violations committed during construction are recorded by the SACS authorities.

The survey showed that, in general, 71.5% of respondents are satisfied with the existing system for checking the quality of work. However, 39.4% of respondents believe that the inspectors of the State Tax Service are biased towards them and allow violations of norms and rules.

As can be seen from the above, the existing system for managing and supervising the quality of design and construction work is not very effective, while the system is not aimed at ultimately obtaining high-quality construction products, but overseeing the implementation of individual stages of the construction process in accordance with building codes.

Given the above, in the 80s of the last century in the developed countries of the world, the introduction of a new control system began, which ultimately ensures the production of high-quality and safe construction products during operation.

At the same time, new mechanisms for quality control over the production of works include monitoring the security of compliance with the technology of production of works and the compliance of the personnel of the construction (design) organization with modern requirements.

The transition to new mechanisms for monitoring the quality of construction and design work will, in turn, require the implementation of a number of organizational measures.

It is necessary to determine the types of construction and types of buildings and structures, during construction, regardless of the sources of financing, public safety measures must be provided (all multi-storey buildings, industrial buildings, hotels, sports buildings, etc.). For each type of buildings and structures, the Ministry of Construction must develop and approve technical regulations, which should discuss all the requirements and standards for the organization of construction, including design, production technology, equipment used, building materials, etc., compliance with which will be monitored carried out by the state.

In view of the foregoing, a phased introduction of the following state system of supervision over the quality of design and construction activities based on market mechanisms is proposed [4, 5]:

1. At the first stage, improve the licensing system in construction. At the same time, it is necessary to restore the system of advanced training and training of specialists and introduce, on a mandatory basis, the certification of engineering and technical and line personnel, as well as the main working specialists - welders, crane operators, assemblers, etc.
2. At the second stage, develop and adopt the Law of the Republic of Uzbekistan "On the safety of construction and operation of buildings and structures on the territory of the Republic of Uzbekistan" and the Law "On State Architectural and Construction Supervision".
3. At the third stage, on the basis of these Laws, develop and implement technical regulations for the production of basic building materials, certain types of design and construction and installation works.

The implementation of the above proposals will streamline the construction sector in terms of ensuring:

- quality of design and construction by increasing the level of design and production of construction and installation works;
- safety of the population, consumers of construction products;
- unification of the system of supervision over the quality of design and construction activities in the Republic of Uzbekistan with the systems of the CIS countries and, first of all, the Russian Federation.

It should be noted that when switching to a new product quality management system, two types of effect should be taken into account: social and economic. The social effect is reduced to the maximum satisfaction of the requirements of the client (customer) based on the ISO standard, series 9000:2000. We call this effect external. However, for a construction organization, it is equally important to obtain an economic effect. If we strictly follow the scientific approach, then this effect should be achieved by calculating the reduction or complete elimination of unproductive costs.

At the same time, it seems to us that it is necessary to conduct a detailed analysis of the sources and the process of formation of the economic effect. If you strictly follow this approach, then you need to determine the totality of factors that affect the effectiveness of the quality management system, identify the available reserves and economically justify ways to implement them.

This approach allows not only to manage the process of obtaining an economic effect, but also to constantly monitor the mechanism for the formation of quality parameters during the construction of objects and structures in construction.

This approach should be based on:

- improvement of the system for monitoring the progress of construction and installation work, starting from the zero cycle;
- improvement of interaction between structural and production units;
- increasing the competitiveness of the quality system and the quality parameters of the construction and installation works;
- improving the interaction between the customer and the contractor, the customer and the design organization.

If we detail all aspects of the activities of the quality system related to the improvement of the system for monitoring the implementation of construction and installation works, then this can be conditionally called the first direction. Under these conditions, fulfilling the requirements of ISO 9001 essentially provides:

- reduction of losses from marriage. Therefore, it is necessary to exercise careful control over the quality of building materials, parts, and structures arriving at the construction site. Basically, marriage depends on the quality of the materials used;
- cost reduction in the operation of erected buildings and structures. This is possible if the author's and technical supervision was carefully carried out during the construction and installation work.

Further, conditionally the second direction, as noted above, is the improvement of the system of interaction between departments. This will allow:

- improve the quality of technical and technological solutions;
- to increase the level of competence and responsibility of the personnel involved in construction and installation work;
- to increase the level of operational planning in the construction of facilities and structures.

The third direction, in essence, is resultant and is associated with ensuring the competitiveness of quality system. In this case, the fulfillment of the requirements of the ISO 9001 standard leads, in combination with all other factors, to an increase in the portfolio of orders.

The most tangible results to be achieved by the quality system are:

Reducing the cost of construction and installation works, as a result of writing off the final price of the finished object, structure; increase in the potential capabilities (capacities) of the quality system, etc.

Conclusions: Ensuring the high quality of construction products in Uzbekistan is associated not only with the identification, elimination, but also the prevention of various defects and inconsistencies. Of course, these actions are associated with additional costs and they affect the assessment of the quality of construction products; elimination of defects - both after the delivery of objects, and during the production of the construction products themselves, as well as measures to prevent defects. As the analysis of practice shows, the costs of assessing the quality of construction products include the costs of the following types of control: quality control and completeness of design estimates of material and technical resources for construction; quality control of works performed under subcontracts; quality control of certain types of construction and installation works during the construction process; quality control of hidden works, finished structural parts and elements of buildings and structures; as well as acceptance control of the quality of the completed and prepared for operation facility.

LIST OF USED SOURCES

1. Decree of the President of the Republic of Uzbekistan on the strategy of action for the further development of the Republic of Uzbekistan. Tashkent: "Justice", 2017.
2. Construction of Uzbekistan. Statistical collection. -T., 2014
3. Industry of Uzbekistan. Statistical collection. -T., 2014
4. A. Suyunov. "Modernization of the economy of capital construction based on the improvement of investment processes." Monograph.-T.: "Science and technology", 2010.
5. A. Suyunov. "Modernization of product quality management systems in the construction complex of Uzbekistan." Monograph.-T.: "Science and technology", 2011.