

## "THE IMPORTANCE OF BASIC MATERIALS AND TECHNOLOGICAL LOSSES IN INCREASING ECONOMIC EFFICIENCY IN THE FORMATION OF COST" (On the example of enterprises for the production of safety windows for surface transport)

Mirzaev Ravshanjon Burxonovich Fergana State University ravshanbek.uz@inbox.ru

#### Abstract

When forming the cost of production of automotive glass for vehicles, the consumption rates of basic materials and technological losses are important. This article attempts to minimize technological losses and accurately calculate the consumption rates of basic materials, as well as analyze them. In conclusion, recommendations are given to reduce the consumption of materials.

**Keywords:** Technological losses, breakdown, consumption of basic materials, technological processes, organization of production, quality indicators.

### **1. INTRODUCTION AND DOLLARS**

As in all industries, the high share of raw material resources in the formation of the cost of production in industrial enterprises remains an important element in a competitive environment. Increasing the efficiency of the use of material resources (raw materials) in the formation of cost remains important. According to the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan dated February 5, 1999 No 54, in accordance with the "Regulations on the structure of costs of production and sale of goods (works, services) and the order of formation of financial results". The share of basic and auxiliary materials that make up the product and directly affect its production is 60-80% of the cost. Therefore, the role of machinebuilding products as a social product, the choice of the consumer, the weight of costs in a competitive environment and the formation of a mechanism to reduce them are important [1].





# 2. METHODS AND LEVEL OF LEARNING

At the current stage of economic development, the problem of effective management of the economy, including the cost of production, plays an important role. However, the current practice of cost management in many machine-building associations and enterprises does not fit into modern tasks because it is not comprehensive and does not provide the necessary reduction in costs. The research and generalization of advanced local and world experience concludes that in order to radically improve this sector of the economy, it is necessary to organize it as an integrated regulatory system of production cost management.

Systematic identification of deviations from the cost norms specific to the normative method allows to take organizational, technological, administrative, economic measures to eliminate excess costs (negative deviations) and disseminate savings experience (positive deviations) and ultimately help reduce costs. Systematic reduction of production costs is one of the main directions in the creation of a real cost control mechanism in organizations and their divisions [2,3,4].

Unfortunately, the normative method of cost accounting in machine-building enterprises is not sufficiently developed and its practical application is limited. However, there are real conditions for the introduction of this progressive method. These include, first of all, increasing the level of technical equipment, specialization within the enterprise, the use of standard technological processes, and others [5,6,7]. The problem of applying the normative method of cost accounting to reduce the normative cost of the product and improve the whole system of cost normalization has gone beyond the point of view of scientists. There is an underestimation of the problem of increasing the interest of enterprises in the formation of reliable information about the cost of production and its reduction. Consequently, the problem of improving the method of cost management of products, including the system of planning and reporting indicators on the cost of products of enterprises, has become urgent.

Despite the research work and scientific-theoretical research, the issues aimed at improving the mechanism of saving the use of production resources in the production of car windows have not been systematically covered. This situation further increases the relevance of the proposals and conclusions on the disputed issues and their solutions.

It is known that at present there is no single body in enterprises that is fully responsible for cost management, has this indicator, manages the whole set of work on the creation of progressive norms and standards of labor use. It is necessary to strive for timely and effective implementation of organizational and technical



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measures affecting the level of norms and standards, the level of production costs, current control and analysis of material and financial resources, justification, planning, production costs and product costs.

Great attention is paid to the accounting and calculation of the cost of production in industrial enterprises. They are covered in the works of the following local authors: L.F. Aksenenko, I.A. Basmanova, P.S. Bezrukix, M.A. Baxrushina, K.M. Garifullina, A.A. Dodonova, B.B. Ivashkevich, T.P. Karpova, E.A. Mizikovskiy, V.D. Novodvorskaya).

Therefore, the role of automotive glass products as a social product, the choice of the consumer, the weight of costs in a competitive environment and the formation of a mechanism to reduce them are important. Not only the economical use of resources, but also the need to organize the technological process in an optimal way and in an integrated manner, aimed at increasing this efficiency, is considered a major factor in the formation of cost. Proper organization of technological processes using the elements of standardized operations and standardized operations also serves to reduce technological losses. As a result, there are opportunities to reduce costs due to the reduction of resources spent on technological losses. One of the non-common features of the resources used in the products of automobile window enterprises is the availability or limited possibility of recycling the obsolete product as a raw material, which creates opportunities for resource-efficient use or, conversely, increases the share of costs. Rational and economical use of production resources plays an important role in ensuring the socio-economic development of developed countries in the world. Its unique features, such as the effective combination of this factor with a properly organized technological process, the full coverage of the interests of market participants, allow its weight in the economy to be significant.

Particular attention is paid to improving the economic mechanisms for the development of efficient use of production resources in the world, including increasing the production of competitive products, ensuring the stability of the "production cycle", regulating interactions and relationships with other forms of management. Expanding the participation of industrial enterprises in ensuring socio-economic stability in the country by increasing their incomes is one of the current areas of research.

With regard to cost optimization, the approaches presented in the framework of the "cost-benefit" relationship are very common (see the work of A.N. Tsigichko, M.E. Lomazov, Ya.G. Lyubinetsky and others). In this case, they usually switch to a system of parametric indicators. In this case, if the parametric performance of the new product is better than the corresponding performance of the old product, the new





technique is considered progressive. In this case, the production approach is replaced by the reproduction approach, that is, the product production processes and its processing processes are considered in unity and in interaction. Cost optimization itself is based on the parametric concept in this case.

However, it should be noted that the problems we study and the problems of their optimization are considered in the following main sections of economics - in the theory of production costs, in the context of the problem of saving resources, in terms of production costs.

## **3. RESEARCH RESULTS**

Car windows are manufactured in accordance with the requirements of GOST 32565 "Safe windows for surface transport". Ensuring product safety depends on the quality of the underlying materials. Proper organization of the technological process, reduction of technological losses are also key factors in reducing costs. The concept of technological loss refers to the consumption of basic materials used for adjustment work during the serial start of the technological process. The main materials for the production of car windows are glass, black ceramic paint (for printing decorative frames), silver paint (for heating system printing), PVB (polyvinylbutyral) film (for triplex windows), plate holders for mirroring, terminals and x ...

Types of glass are also important in shaping the cost of production and technological losses. Because the windows of vehicles are divided into multilayer (triplex) and tempered windows. Differences in the technological process also differ in technological losses and material costs. Factors such as the professionalism of the operator and the suitability of the equipment, which adjusts the increase or decrease of technological losses, also influence.

Let us consider the stages of the technological process of technological losses for the manufacture of windshields and tempered glass:

1. Technological losses in the process of shaping and polishing of primitives on flat surfaces.

2. Technological losses in the process of printing decorative frames on shaped windows

3. Technological losses in the bending process

4. Technological losses in the process of welding connectors to the heating system

Technological losses are calculated as a percentage of the batch. An increase in the share of technological losses leads to an increase in the cost of production, or, conversely, as a result of the development of a mechanism to reduce technological losses are influenced by factors such as improving the skills of operators, ensuring





equipment compliance, timely maintenance, spare parts. Consumption of materials for tuning is an integral part of the process. Car windows have a separate character with the impossibility of avoiding these costs in production. Due to the nature of the technological process, the limited possibility of recycling consumables also leads to an increase in cost.

An effective way to reduce technological losses is to reduce the weight of technological losses by increasing the amount of this batch. To do this, it is necessary to carefully organize the production planning process. Because the number of models and the large number of their details determine the batch quantity. In planning, it is important to take into account the weight of technological losses and the depreciation of technological equipment, the possibility of saving time on adjustment.

In the Republic of Uzbekistan, the import of materials for the development of safe windows for surface transport, as well as limited localization, lead to an increase in the cost of production. The import of sheet glass, PVB films, as well as black ceramic paint and silver pastes, depending on the color and thickness of the main materials, forces to develop measures to reduce technological losses in the cost of production. Proper and economical disassembly of basic materials also reduces material consumption. When designing sheet windows, ordering the size of waste-free window panes also helps to reduce the cost of materials used in the product. However, due to the marketing strategy of the listing company, this issue is also problematic. This is because sheet glass manufacturers try to avoid coordinating different sizes of different orders. They try to produce in sizes that are comfortable for them. Focusing on the development of cost-effective models for the efficient use of local resources, JSC "Quartz", located in the city of Quvasoy, produces architectural lined windows for the construction industry. Architectural windows are radically different in quality and content from car windows. Due to the high demand for car windows, local manufacturers will need to modernize their production lines. This will lead to additional investment for technological rearmament.

## **4. CONCLUSIONS**

In conclusion, an attempt was made to take a scientific approach instead of technological losses in the formation of norms of consumption of basic and auxiliary materials in the formation of the cost of the product. Attention was also paid to the adjustment and modernization of machine tools and equipment to reduce technological losses, the correct design of technological maps and operations, the skills and professionalism of the operator to reduce technological losses. Efforts have also been made to reduce technical emissions, develop optimal solutions to reduce



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waste, and conduct fruitful negotiations with suppliers of raw materials to highlight their contribution to reducing emissions.

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