The construction materials actual cost accounting issues in terms of the estimated and regulatory framework reforming

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Abstract. Some problems in the materials actual cost accounting caused by the operating methodological and regulatory framework imperfection and discrepancy in the conditions of pricing system reforming and budget rationing in construction are considered in this article. These problems’ influence on the receipt accounting processes and the construction materials use is discussed.

Introduction
The pricing process in construction has certain features related to the fact that the main investment participants and the construction activities, such as the designer, customer and contractor, simultaneously interact in the construction market value formation. The construction industry specificity the is also caused by the circumstance that there is a market pricing system and an estimated (budget) rationing determining the free (contractual) prices for the construction products at all the stages of an investment project.

The emergence of problems in determining the construction costs reliability today is due to the imperfection and discrepancy of the current pricing system and estimated rationing in construction. Firstly, there is a change in current prices for building materials owing to changing market conditions, that occurs sometimes several times a year, and secondly, there are fixed contracts’ prices that cannot be modified in accordance with the Federal Law No 44-FL.

Goal and methods of study
Pricing in construction is regulated by the system of norms, quotations (prices), normative and methodical documents. The base of 2001 which is currently in the process of reforming now is used in the pricing system and estimated rationing. The existing estimated regulatory framework, which has been used for almost two decades represents a set of outdated normative legal acts as it was created on the basis of the estimated norms and standards connected with other resources, other equipment, technologies, but today these indicators have lost their relevance.

The main purpose of this article is the construction materials actual cost accounting perspective research in the pricing and estimated rationing system reforming conditions.
During the study we used the methods of describing, comparison, generalization, analysis and synthesis of the mentioned documents the approaches to assessing the land plots used in their framework, as well as the measurement and formalization methods.

Discussion

Direct costs, overhead costs and estimated profit are involved in the construction products cost formation during the primary estimate documentation (local estimates) development. The direct costs associated with the work directly on the construction site include the labor costs of the main workers, builders, construction machines and mechanisms (including the labor costs of machine operators) operation costs and the cost of construction materials, products and constructions. In today's situation, the most problematic elements of direct costs are the construction materials, products and constructions actual cost determining.

The construction materials, products and constructions costs are defined proceeding from data based on the normative need (standard need) for material resources (in physical units of measure) and their corresponding price. The standard need for resources is defined on the resource indicators basis calculated in the regulatory base named State Itemized Construction Estimates (SICE) or according to the design data. The material resources cost can be determined in basic level of prices (in the prices on 01.01.2000) as well as in the current level of prices at the time of drawing up budget calculations (estimates). The budget (estimated) prices of construction materials are determined on the material resources nomenclature base according to the Classifier of Construction Resources (further CCR).

CCR is a systematized list of construction material resources with the code assigned for each of them and harmonized with the All-Russian Product Classifier by the types of economic activity. The basis of the estimated prices for material resources is the information about the selling prices for materials, products and structures used in construction. Selling prices (sales prices) of domestic production material resources include the cost of a container, packaging and a prop (if any), the cost of a set of spare parts for the warranty period of operation (for equipment), the costs of production’s loading on vehicles at the manufacturer’s warehouse. Selling prices are defined excluding VAT [1]. In determining the final cost of construction materials are also considered transportation costs, procuring and warehouse expenses.

Transportation costs are defined by drawing up the accounting of transportation costs (calculation) per 1 ton of construction material, products or structures. During the material resources transportation, the road, railway, sea, river and air transport can be used. For the transportation costs accounting before 01.01.2019, the Ministry of Transport of the Russian Federation undertakes to form a list of legal entities transporting of construction materials, products, structures, equipment, machines and mechanisms by road [2].

To select the optimal (actual) prices for the material resources, it is recommended to monitor the resources price. The construction resources prices monitoring is the collection of information necessary for the formation of the budget (estimated) prices of construction resources applied for the estimated cost determination of construction, reconstruction, overhaul of capital construction objects in the cases provided by part 1 of article 8.3 of the Town Planning Code of the Russian Federation. The construction resources prices monitoring is carried out by a state institution subordinated to the Ministry of Construction, Housing and Utilities of the Russian Federation and authorized to create and operate an information system. [2].

Based on the results of the construction resources’ prices monitoring conducted by the Ministry of Construction, Housing and Utilities of the Russian Federation, the estimated prices for materials, products, structures and equipment are determined, which are then to be placed in the Federal State Information system for Pricing in Construction (FSIS PC) using a unified system of interdepartmental electronic interaction [2].

In accordance with the types of economic activities stipulated by the All-Russian Classifier of Economic Activities, associated with production of construction materials, products, structures, equipment, machines and mechanisms included in the CCR, a “list of legal entities and their separate
subdivisions (legal entities) operating for production on the territory of the Russian Federation of construction materials, products, structures, equipment, machines and mechanisms included in the CCR” is formed [2].

The problem in the materials actual cost accounting today consists in the existence of many suppliers on the market and also in the constant change in the construction materials prices, as well as the problems of information support (FSIS PC).

The construction materials actual cost accounting features indicated are the serious drawbacks of the new information and methodological base formation.

Due to the elimination of these imperfections and contradictions of the current estimate and regulatory framework, in 2015 the Federal Center for Pricing in Construction and the Ministry of Construction, Housing and Utilities of the Russian Federation developed the concept of “400 days reform”, the purpose of which was to form a new information and methodological framework in the conditions of reforming the pricing system and estimated rationing. For example, the Federal State Information System for Pricing in Construction (FCIS PC), developed and introduced for the purpose of transition to the resource method for determining the estimated cost of construction, will be opened, including a register of estimated (budget) standards, manufacturers and information about the main construction materials and their cost with display on subjects of the Russian Federation. The Ministry of Construction, Housing and Utilities of the Russian Federation suggests to start using of the estimated prices for construction resources for budget construction projects determined by the resource method placed in FSIS PC not from 2019, as previously planned, but from 2022. And from 2021 the Ministry of Construction, Housing and Utilities of the Russian Federation suggests to start approbation of the resource model with an ability to determine the cost of construction by the resource-index method on discrete resources [3]. Over the past three years, the Ministry of Construction, Housing and Utilities of the Russian Federation in the FSIS PC has already updated more than 300 rules, about 50 thousand norms.

In order to fulfill the instructions of the Ministry of Construction, Housing and Utilities of the Russian Federation and implement the Action Plan on interaction of the Ministry of Construction, Housing and Utilities of the Russian Federation, the Federal Center of Pricing in Construction and the Industry of Construction Materials (FCPC ICM), as well as in the framework of reforming the pricing system and estimated rationing in the construction industry by the Glavgosexpertiza of Russia (federal autonomous institution) the construction resources classifier has been updated. Thus, the changes were made to 3505 positions, including: 3432 materials, products and structures; 73 - machines and mechanisms. Besides, 88 positions were excluded from the CCR, including 87 - materials, products and structures; 1 - machines and mechanisms. Currently CCR is placed in FSIS PC and contains information about 103787 construction resources [4].

When developing the new estimated regulatory framework, some of the shortcomings haven’t been changed, in particular:
- discrepancy between the fees and the existing outdated technologies;
- rarely used materials, practically not used in construction still have a place in the estimated prices collections;
- discrepancy between the estimated and market value of resources, etc. that causes the unreliability of the construction cost at the pre-project stage.

The Union of Engineers and Estimators has prepared a detailed Plan of transition to the resource-index method for determining the estimated cost of construction and calculations for work performed since 2019. The introduction of the resource-index method based on the Federal Unit Costs (FUC) of the Ministry of Construction, Housing and Utilities of the Russian Federation will solve many problems in the system of accounting of the actual cost of construction materials, in particular:
- an issue of selection and replacement of materials in accordance with the project decision will be solved;
- deactivated materials will be specified within the other FUC groups;
- the main construction materials will be given in estimates and acts of the performed works in separate lines and will be available for justification and verification;
- in terms of construction materials derived for the pricing, transportation costs can be calculated on the basis of the new Techniques of the Ministry of Construction, Housing and Utilities of the Russian Federation;
- the main disadvantages and errors of the indexing system will be “leveled” by using the resource approach in terms of estimated prices for the main construction materials, products and structures [5].

Results and conclusion
The construction materials actual cost determination is important not only in terms of estimated pricing, but also in terms of the actual costs accounting.

The main part of materials is used in production as objects of labor. They are consumed in each production cycle and fully transfer their value to the cost of the performed works (services rendered; products manufactured).

When performing works under a construction contract the stocks will be considered as the construction materials, and finished products that then as the volume of construction and installation of performed works or the construction project as a whole.

The material values are divided into types, varieties, marks, standard sizes within each group. Each item, grade, size is assigned a numerical designation (item number) and they are recorded in a special register, which is called the Price Tag Nomenclature. The Price Tag Nomenclature indicates units of measurement and the accounting prices.

Inventories are taken into account at the actual cost. The actual cost is the amount of the organization’s actual expenditures of acquisitions (excluding VAT), manufacturing and bringing the materials to the state in which they will be usable.

The actual cost of materials depends on the way they usually come to the organization:
- purchased for a fee;
- received free of charge;
- received as a result of the liquidation of any property of the organization;
- made by the organization itself;
- received under an exchange agreement;
- accepted for processing.

The construction company can receive materials as from suppliers, so directly from customers, depending on terms of the contract. If the materials are supplied by the customer, the construction contract determines whether the contractor buys materials from the customer or the customer submits them on a give-and-take basis. The customer, as a rule, transfers the stocks to the contractor, reserving the property right (on a give-and-take basis). In this case, the contracting construction organization does not pay for the received raw materials.

Upon completion of construction, the cost of the materials used by the contractor should be included in the acceptance report of the performed construction and installation works (as-built quality report - form KS-2). Based on this act, the purchaser charges the cost of materials to an increase of the initial cost of the construction object.

The contractor’s inventories that are not owned by the organization, but being used in accordance with the terms of the contract, should be accepted for accounting into off-balance accounts in assessment provided in the contract.

The actual cost of donated materials is determined proceeding from their market value on the date of capitalization. In case of receipt of materials as a result of liquidation of the property, the resources have to be accepted for accounting at the market prices valid on the date of write-off of an object. The production of materials by the organization’s own forces requires the determination of the actual cost based on the actual expenses associated with the production of these materials. When materials are received under an exchange agreement, the actual cost is determined by the value of the transferred property or to be transferred by the organization.
In accordance with the Russian Accounting Standard (RAS) No 5/01 on materials for which the current market value has declined during the year or that are outdated or have lost their original quality, the construction company has the right to form a reserve against decreases in the value of tangible assets.

Disposal of materials from the organization may be caused by the following reasons [6]:
- released into production;
- transferred without compensation (donated);
- transferred under an exchange agreement;
- written off as a result of unsuitability for use;
- transferred to recycling;
- transferred to custody.

In any of the above-mentioned options it’s required to get the information about market price, which is determined on the basis of the terms of the contract between the buyer and the seller (individual or legal persons). This procedure is complicated today by the existence of many suppliers on the market and also the constant change in prices for construction materials and resources.

Summary
Thus, the existing estimated regulatory framework has many problems, imperfections and contradictions, and needs significant adjustment. The main task in the pricing system reforming field in construction today is the transition from the basic index method of the building construction cost to the resource method, since the materials actual cost reflection determines the construction costs reliability and creates a basis for effective relationships between the investment participants and the construction activities.

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