# On the Optimal Allocation of the Resources in the Management of Building Materials

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**Abstract:** Because the demand of the construction market in our country is constantly decreasing, so it is necessary for the construction enterprises to reduce the cost to a certain extent, because only by reducing the cost and increasing the income as much as possible, can the long-term development of the enterprise be guaranteed, and the reduction of the cost can mainly be carried out through material management. This paper also mainly focuses on the analysis of the optimal allocation of resources in the construction engineering material management. At the same time, through the optimization of the use of building engineering materials, the project cost will be studied to reduce the material cost and increase the benefit of the enterprise as far as possible during the construction period of the construction project.

## 1. Problems existing in material Management of Construction Engineering

## 1.1 Unreasonable preparation of material budget plan

In the process of engineering construction, materials are indispensable, and the choice of materials should also be careful, and the procurement of materials is often to select suppliers first, and the form of choosing suppliers is bidding, but if the construction enterprises do not have a reasonable budget plan for materials before starting bidding, then it is very easy to lead to unnecessary project costs in the process of engineering construction. However, the material budget plan is usually difficult to budget reasonably for a variety of reasons, so it is also a very key issue in the material management of construction engineering.

## 1.2 Acceptance and use of materials do not meet the requirements

At present, there is a situation in which the on-site acceptance personnel do not stick to their posts or have private contact with the supplier, and if the personnel of the on-site acceptance materials accept the benefits of the supplier, they will casually accept and accept the materials, and there may finally be two situations, one is that the materials do not meet the requirements, and the second is that the quantity of materials is not enough and needs to be purchased, but in either case, Will delay the progress of the construction project, for the construction company, this is not only a waste of materials, but also a waste of construction time.

## 1.3 Problems in the storage and custody of materials

in material management, material storage is a very critical step because, once a problem in storage of that material is present, the material management situation is very confusing, but this is difficult to avoid, the key to material storage personnel, If the material storage personnel is an experienced storage administrator and has been in a position to ensure the access to the materials is very strict, the material storage is not easy to solve, but if it is not an experienced storage administrator, the access to the material is not strict, It is easy to have problems, and once a problem arises, the impact on the construction of the construction is very large.

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### 2. Analysis on the causes of problems in material Management of Construction Engineering

## 2.1 Characteristics of Construction projects

The construction period is too short, or the process is too tight, and so on, these are the characteristics of the construction project, but the material budget has encountered a lot of problems, and the project budget personnel will encounter a lot of work, such as contract management and check the amount of work, and the amount of construction, and so on, and because of these reasons, the material budget is very inaccurate.

## 2.2 Supervision of the use of materials

In the process of acceptance of materials and in the process of material use supervision, material supervision is generally through the engineering department or the project finance department to be responsible, and the material acceptance in the use of the project will be due to the lack of professional level of the engineering department or the project finance department staff, especially when the engineering department or the project finance department staff do not know enough about the specifications of the material, it is more prone to problems. In addition, material supervision is not in place if the management's work attitude is problematic and the process of material access and use is ignored. Of course, the number of managers is also. Be sure to be adequate, only sufficient managers can do better management, because if there is a lack of managers, there is a good chance that there will be mistakes, or managers will not be able to do anything about themselves.

## 2.3 Material storage management

In the process of material storage management, the problems that will exist are often the common problems of many construction projects, because many construction projects will not classify and manage the materials, and if the materials are not better kept and managed, then they will not meet the requirements of green construction, and if the materials are arranged in disorder, it is easy to cause trouble to the surrounding residents. In the process of construction, civilized construction should also be achieved.

## 3. Countermeasures to eradicate Bad behavior in Construction Engineering material Management activities

## 3.1 Reasonable preparation of material budget, procurement plan

When facing the unreasonable situation of material budgeting, construction enterprises should employ relevant experts to train the personnel of material budgeting, and the experts hired should be experts with rich experience and knowledge reserve, and the training can be held regularly or irregularly. At the same time, compared with the same type of construction projects before, budgeting personnel can also sum up certain experience. And estimate the material budget, of course, when the budgeting personnel draw lessons from the previous experience, we should combine the current construction project to carry out.

#### 3.2 Strengthening the acceptance work of material entrance

#### 3.2.1 Acceptance formalities

In the process of material mobilization, the management personnel shall accept and confirm the data according to the mobilization plan and certificate of the material, as well as the quality guarantee and product certificate, and shall also ensure that the quality of the material is not a problem, as if the later material has problems, The project will also have a great impact. The acceptance record shall be made after the quality is confirmed, as the later acceptance record may be used in the later stage.

#### 3.2.2 Material acceptance process

Material quality acceptance work should be carried out according to the material quality acceptance code. If it is not carried out according to the material quality acceptance code, then the variety and model of the material, as well as the quality and quantity may have problems, but once the problem occurs, it will bring not only the impact, but also the economic loss to the construction project.

## 3.2.3 Material acceptance certification

If the material is required to be re-examined, the re-examined material must have a sampling and inspection certificate report, and if the new material has not been tested and identified, it can not be used in the project, in the field configuration of the material, must also be tested and certified, because the material without trial matching and certification can not be put into the construction project.

## 3.2.4 Inspection of material metering equipment

The measuring equipment of the material should be inspected regularly at every period of time, and it must also go through the qualified organization, because the qualified organization can guarantee the accuracy of the measurement, and then it will not be put into use because the measurement of the material is not up to standard. Resources that cannot be put into use are a waste in construction.

#### 3.2.5 Material return

If the material does not meet the planned requirements or the quality of the material is not up to standard, then the material must be replaced or returned, or demoted, and the unqualified material should not be used in the process of using the material, because the use of unqualified material will lead to poor quality of the project.

## 3.3 Take the necessary storage and storage measures

After the material enters the field, needs to carry on the acceptance, only after the acceptance material can enter the warehouse, and the material should also be stacked separately according to the variety and the model, the material stacked in the material warehouse must have certain protective measures, that is to say, the material must be stacked in the material warehouse, must have the fire prevention, the anti-theft and so on protection measure, whether it is the natural injury or the human injury must try our best to avoid. At the same time, some toxic or explosive materials should be stored in special warehouses, and there should be designated people to carry out maintenance, of course, there should be strict safety measures, and the shelf life of the materials should also be marked, and regular inspection should be carried out. To prevent the material from expired, and the materials on the spot should be arranged in the location, do a good job of custody measures, in accordance with the rules and regulations of custody, and material entry and exit should have special records.

#### 3.4 Rational input of materials

When the construction plan has been determined, the material with time limit must conform to the organization and management under the condition of ensuring quality and safety, and also set the goal and formulate the reward and punishment measures. At the same time, if the material is jointly owned by Party A and Party B, then both Party A and Party B need to confirm the good material in advance to ensure that there will be no problems in the construction process of the project. And if there is a loss caused by other parties should also be recorded, do a good job of claim.

#### 4. Conclusion

There will be many problems in the process of engineering construction, but most of the

problems are brought about by materials. This paper mainly summarizes several problems caused by materials, and makes a detailed analysis and discussion of these problems. At the same time, it also puts forward some suggestions for rationalizing the use of materials, which minimizes the waste of engineering projects.

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