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## **Research on Application of fiber concrete pavement construction technology**

*In order to make the construction of fiber concrete pavement more efficient, enrich the technical connotation in the construction, and maintain its good construction progress and quality, it is necessary to consider the practical application of construction technology required in this aspect, so as to avoid the adverse impact on the application value and driving safety of fiber concrete pavement.*

Combined with the construction status and requirements of fiber concrete pavement, if we can deeply consider the practical application of its construction technology, we can make this kind of pavement construction more efficient, complete the construction plan of fiber concrete pavement on schedule, and enrich the technical means required in the construction. Therefore, in the research of fiber concrete pavement construction, we should pay enough attention to the practical application of construction technology, increase the control in the application process, promote the construction quality of this kind of pavement more reliable, comprehensively enhance the potential application value of fiber concrete pavement, and inject vitality into the scientific development of road construction.

### **1. Overview of fiber concrete pavement construction**

The so-called fiber concrete is a kind of composite material made of fiber and cement-based materials. It has the advantages of high tensile strength and good applicability in application. It can provide technical support for efficient construction of pavement engineering and has a good market application prospect. At the same time, through the consideration of the scientific application of fiber concrete, the expansion of cement cracks under the action of external force can be limited and constrained, the good quality of pavement application can be maintained, its service life can be extended, and the materials needed for the development of related construction operations can be enriched. In addition, with the support of construction technology, control mechanism and other elements with good applicability, it is conducive to enhance the construction effect of fiber concrete pavement, improve its quality level, make it have good functional characteristics in pavement application, and give full play to the actual role of cement-based materials and fibers.

### **2. Discussion on the application of construction technology based on fiber concrete pavement**

On the basis of understanding the functional characteristics and application value of fiber concrete, in order to make the pavement construction work can be completed smoothly, we need to think deeply about the application of the corresponding construction technology, and make clear the technical points in this aspect. It includes the following aspects.

### **2.1. concrete mix design.**

In the process of completing the construction of fiber concrete pavement and strengthening the use of its construction technology, the concrete mix proportion design should be fully considered to promote the application effect of this construction technology. During this period, we should:

1) According to the types of fiber concrete and the functional characteristics of its mixture, combined with the requirements of construction and industry technical specifications, strengthen the awareness of concrete mix proportion design, actively carry out the corresponding design work, promote the performance of fiber concrete more reliable, and provide professional guarantee for the scientific application of its pavement construction technology;

2) Strengthen the scientific design consciousness of fiber concrete mix proportion, and fully consider the influence of volume ratio, mixture quality and other factors, so as to make the quality of concrete application more reliable, maintain the good application status of pavement construction technology, and avoid adverse impact on its application value and construction benefit.

### **2.2. Concrete transportation.**

In the implementation of fiber concrete pavement construction plan, in order to realize the efficient use of its construction technology and optimize the use function of this kind of concrete, its transportation needs to be considered. The specific performance is as follows:

1) In the selection of fiber concrete mixing site, the length and convenience of transportation should be considered, and the area close to the construction site and convenient transportation should be selected as far as possible, so as to shorten the transportation time of concrete, ensure the good application effect of fiber concrete, and better reflect the application value of its pavement engineering construction;

2) According to the characteristics of fiber concrete and the requirements of efficient pavement construction, the transportation vehicles and routes are selected to control the temperature in the transportation of this kind of concrete to avoid affecting the transportation and application effect, so as to provide guarantee for the smooth implementation of fiber concrete pavement construction plan;

3) The unloading height should be well controlled to avoid segregation in the application of fiber reinforced concrete, so as to make the pavement construction supported by such materials more efficient and enrich the practical experience of fiber reinforced concrete transportation.

### **2.3. Paving and vibrating.**

In order to achieve the expected effect of fiber concrete pavement construction and ensure the effectiveness of its construction technology application, we need to

think about the paving and vibration in this aspect of construction. The specific performance is as follows:

1) In the paving construction of fiber concrete pavement, the uniformity and continuity should be considered to avoid affecting the paving construction quality, so as to provide professional guarantee for the efficient construction and structural performance optimization of concrete pavement, and meet the requirements of the smooth development of subsequent construction operations;

2) In the process of implementation of vibration operation, according to the actual situation and the construction requirements of fiber concrete pavement, the time limit is that there will be no more frost boiling and bubbles, the actual role of vibration operation should be fully played, the compactness in the application of fiber concrete should be improved, and the occurrence rate of pavement construction quality problems should be reduced.

### **3. Measures to improve the application level of fiber concrete pavement construction technology**

#### **3.1. Strictly control the application process of construction technology.**

Through the full consideration of the fiber concrete pavement construction status, construction technology application advantages and other aspects, in the process of improving its application level, the construction unit and management personnel should pay attention to the strict control of this kind of construction technology application process. Deal with the details of the problem, promote the fiber concrete can be in a good state of application, achieve its pavement construction goal, avoid affecting the use value and effect of this construction technology. At the same time, we should strengthen the awareness of scientific management and control in the application of fiber concrete pavement construction technology, increase its management and control efforts, and provide professional guarantee for the improvement of the application level of such construction technology.

#### **3.2. Pay attention to the scientific evaluation of the application effect of construction technology.**

Combined with the actual situation of the construction site of the fiber concrete pavement project, in the process of using its construction technology to complete the pavement construction plan, we should actively carry out the corresponding evaluation work, and summarize the factors that affect the construction quality of the fiber concrete pavement and its technical application effect. To provide a reference for the implementation of the corresponding treatment plan, so that the application of construction technology in this area can get the necessary support, so as to achieve the purpose of comprehensively improving the application level.

### **4. Conclusion**

To sum up, through the clarification of different technical points and the coordinated use of measures, the construction effect of fiber reinforced concrete pavement can be more significant, the actual needs of the in-depth promotion of its construction plan can be met, and the construction risk in this aspect can be avoided. Therefore, in the process of improving the construction level and optimizing the

construction method of fiber concrete pavement in the future, more attention should be paid to the construction technology required in this aspect, so as to ensure the effectiveness of this kind of pavement construction, meet the requirements of efficient construction and scientific application of fiber concrete pavement, and enrich its construction content and practical experience. On this basis, it is conducive to reduce the incidence of fiber concrete pavement construction problems.

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