ЗНАЧЕНИЕ СУЛЬФАТОСТОЙКОГО ПОРТЛАНДЦЕМЕНТА В СТРОИТЕЛЬСТВЕ

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Аннотация: *Сульфатостойкий портландцемент чрезвычайно устойчив к сульфатной воде, а также очень морозостоек и может выдерживать влажные и расслабляющие условия.*

Ключевые слова: *портландцементный клинкер, сульфатная агрессия цемента, сульфатные воды.*

IMPORTANCE OF SULPHATE-RESISTANT PORTLAND CEMENT IN CONSTRUCTION

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Annotation: *Sulfate-resistant Portland cement is extremely resistant to sulphate water, as well as very cold-resistant and can withstand damp and relaxing conditions.*

Key words: *portland cement clinker, cement sulphate aggression, sulphate waters*

Such a hydraulic binder (cement) is formed as a result of fine grinding of Portland cement clinker of a certain mineralogical composition, which makes it extremely resistant to sulphate water.

In order to change the biting time of the cement as needed, it is allowed to add gypsum to the cement in the amount not exceeding 3% of the CO_3 content, and hydraulic additives up to 15% are added to increase the water resistance.

As mentioned above, the main reason for the corrosion of conventional Portland cement in sulphate water is the interaction of tri-calcium hydroaluminate with water-soluble gypsum. The result is calcium hydrosulfoaluminate ("cement bacilli"). It crystallizes in cement stone pores and tends to break down the stone. This means that if the clinker has a C_3A mineral load, the cement can withstand the sulfate aggression. However, it is not possible that the clinker does not contain C_3A at all, because in this case, as mentioned above, the hardening of the cement is extremely slow. Therefore, although sulfate-resistant Portland cement clinker is low, but S3A is certainly present. But it should not exceed 5%. When clinker has only a certain level of C_3A, the clay is a soil modulus

The amount of Al_2O_3 / Fe_2O_3 should be at least 0.7.

The sulphate-resistant Portland cement production scheme will be the same as usual. Only stronger requirements are imposed on the chemical composition of the raw material and the mineralogical composition of the clinker.

Sulfate-resistant portland cement 300; Produced in 400 and 500 brands.

Sulfate-resistant Portland cement is extremely resistant to sulphate water, but also allows concrete to work very well, which is very cold-resistant and can withstand damp and rest conditions. Therefore, it is used in the manufacture of concrete and reinforced concrete structures that are exposed to sulphate water during repeated wetting or freezing.

Sulfate-resistant Portland cement is used in the production of precast concrete and reinforced concrete structures when concrete is required to be extremely cold and corrosion resistant.

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