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АСФАЛЬТОБЕТОН В ЖАРКО-СУХИХ КЛИМАТИЧЕСКИХ УСЛОВИЯХ НЕДОСТАТКИ РАЗВИТИЯ И ИХ УСТРАНЕНИЕ

Аннотация: Битумно-резиновая смесь повышает пористость асфальтобетона, его устойчивость к вредным воздействиям окружающей среды.

Ключевые слова: резиновый порошок, асфальтобетон, битумно-резиновая смесь.

ASPHALT CONCRETE IN HOT-DRY CLIMATE CONDITIONS DEVELOPMENT DEFICIENCIES AND ITS ELIMINATION.

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Annotation: *Bitumen-rubber mixture increases the porosity of asphalt-concrete, its resistance to harmful environmental influences*

Key words: *rubber powder, asphalt-concrete, bitumen-rubber mixture*

The country pays great attention to capital construction, including road construction, and the state allocates a lot of material and financial resources for its further development. Asphalt concrete is widely used in the construction and reconstruction of road infrastructure.

The results of research aimed at studying the technical condition of existing roads in recent years, as well as data collected during their operation, showed the deterioration of asphalt-concrete pavements and rapid deterioration of road quality in hot and dry climates of the country. These days, in order to further improve the quality of asphalt-concrete roads, scientists of the Republic are doing great research on the production of activated powders from local

mineral stones, the use of road polymer-bitumen compositions, improved asphalt-concrete composition.

For the first time, scientific and practical work to increase the durability of asphalt concrete in a hot-dry environment was aimed at improving its properties by adding natural rubber to it. The subsequent creation of artificial rubber led to a reduction in the cost of rubber. This has provided economic benefits in improving the quality of roads. Year by year, the demand for constructive durability of roads and further reduction of their cost has increased. Broken car tires were recommended instead of synthetic rubber. As a result of the further expansion of road construction, scientists have proposed new polymer compounds. As a result of the further expansion of road construction, scientists have proposed new polymer compounds.

There are many ways to add polymer compounds to molten bitumen or asphalt-concrete mix. Among them, the scientists of the Institute of General and Inorganic Chemistry of the Academy of Sciences of Uzbekistan SPEOP polymer compound TAYI scientists (Khojimetov N, Kasimov I) added to the asphalt concrete and managed to increase its resistance to sliding in thick and liquid conditions.

The use of rubber powder to improve the quality of asphalt concrete has become widespread in road construction. The rubber-bituminous asphalt-concrete mixture is mixed at 180-220 ° C for 4-5 hours to make it uniform and smooth. If such heating lasts 10-14 hours, the efficiency of rubber in bitumen does not exceed 10%. It is known that tire rubber does not dissolve in bitumen at all, only much. That is why the rubber industry produces baked or unbaked rubber powder. This powder dissolves quickly in bitumen in 15-40 minutes at a temperature of 130-160 ° C and does not adversely affect the asphalt-concrete mixture. The advantage of the rubber compound is that it binds fine and coarse aggregates together with mineral powder and bitumen to form an elastic and sticky slurry. This prolongs the durability of the asphalt-concrete road in hot-dry

climates. Bitumen-rubber mixture increases the porosity of asphalt-concrete, its resistance to harmful environmental influences. The water permeability of asphalt concrete added in the amount of 3% of rubber powder is reduced by 10 times, and the frost resistance is increased by at least 30%. The bite of the car tire on the asphalt-concrete surface of the road will increase by 20-40%. i

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