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Аннотация: Использование устаревшего асфальтобетона позволит сократить объемы строительства и ремонта дорог, обеспечить их сохранность в течение многих лет, снизить затраты и повысить экономическую эффективность, а также улучшить экологию

Ключевые слова: асфальтобетон, строительство, неразрушаемый.

OLD ASPHALT CONCRETE AND ITS PROCESSING PROSPECTS.

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Annotation: The use of obsolete asphalt-concrete will reduce the construction and repair of roads, ensure that they will not be damaged for many years, reduce costs and increase economic efficiency, as well as improve the environment.

Key words: asphalt-concrete, construction, indestructible

Construction is the most materially and costly sector of the national economy. Currently, the cost of production of construction materials and products is 60% of the cost of construction and installation work, or one third of the state budget. Therefore, the main factor in reducing the cost of construction work is to reduce the cost of construction materials, further improve their production methods, produce new building materials based on modern technologies to replace some existing ones, improve their properties, take precautions during transportation and storage. and their proper and economical use in their place.

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. The main reason for the wear of asphalt concrete is a change in the physical and chemical properties of the bitumen binder in its composition under the influence of weather and environment, ie temperature, sunlight, air and water. Under the influence of the environment, the amount of oil in the bitumen decreases, part of the resin turns into asphaltene. As a result, the amount of asphalt increases, due to which the bitumen thickens and it begins to become brittle.

In this process, the wear of the bitumen in the coating reduces its durability. There are cracks, fissures and pits. The thickness of the asphalt-concrete layer laid and the size of the surface have a significant impact on the wear of the bitumen. The thinner the asphalt-concrete layer, the faster its wear in arid and hot climates, including Uzbekistan.

In road construction, new asphalt-concrete will be laid on the old, broken asphalt. As a result, the thickness of the road surface, especially on city streets, increases to 40-50 cm. When the roads were repaired, the old asphalt-concrete layer was torn off, piled on the side of the street, and thrown away as garbage. There were times when 45-60 tons of old asphalt-concrete was removed from the city of Tashkent a year. However, recycling of old asphalt concrete would save 28-40 thousand tons of natural stone and 2.1-2.6 thousand tons of bitumen. The technology of processing old asphalt-concrete mainly consists of heating the surface of worn or damaged asphalt-concrete, tearing off the melted layer, adding the required amount of additional bitumen, compacting the finished asphalt-concrete mixture.

At present, several methods of processing old asphalt concrete have been

developed. Among the methods of regeneration of asphalt concrete, heating with a high-frequency electric field was found to be the most cost-effective. Because, according to this method, heat energy is generated due to moisture and water heating inside the pores of the asphalt-concrete layer. The fine and coarse aggregates in the asphalt-concrete, which have become obsolete over the years, turn the surface into an activated mineral stone due to the absorption of the binder bitumen in it. Such aggregates are of the highest quality for recycled asphalt-concrete mix. Before developing the technology of using outdated asphalt concrete, its properties are thoroughly studied in the laboratory. Cylindrical specimens are carved from asphalt-concrete used for many years (15 and 40 years). The bitumen in it is divided into fine and coarse aggregates and tested. According to state standards, the average durability of asphalt-concrete pavement is 10-13 years. The use of obsolete asphalt-concrete will reduce the construction and repair of roads, ensure that they will not be damaged for many years, reduce costs and increase economic efficiency, as well as improve the environment.

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