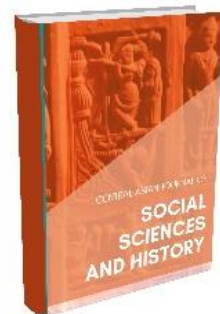




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Improving the Process of Building our Cement Concrete Roads

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Abstract:

The need for public-private partnership in the field of road construction, the active involvement of international organizations and private partners in the construction or repair of roads.

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Introduction. In world practice, there are currently two main technologies: Construction single-layer concrete coatings and double-layer concrete coatings. they can't control the deterioration of the air when it causes low relative humidity, all of which Innovative developments encourage the development of concrete road construction techniques. In the United States, Comaco offers coating techniques for single-layer coatings. If we do not study these technologies and choose the technology that suits the conditions of Uzbekistan based on world experience, we will not be able to build quality roads. The construction of cement concrete roads also requires a lot of economic resources, so it is necessary to act wisely. Let's take a look at the technologies offered by US and German companies. In the process of analyzing and improving the technology of construction and repair of cement concrete pavements on highways, I was convinced that the roads in Uzbekistan are in a very poor condition. I can say that if we look at the number of developed countries, we can see that 60% of public roads in the United States have been converted to 38% in Germany and 46% in Australia to cement-paved

roads. Now let's look at the public roads of Uzbekistan, if there are more than 184,000, of which only 1% are cement-concrete roads, then we know that we are also using cement roads will be expedient if we spend. The service life of our cement-concrete roads is declining due to the fact that they are located in mountainous areas. Requirements for concrete are determined by the following characteristics: strength, average strength, resistance to various influences, elastic-plastic, heat-physical, protective, decorative and other, as well as for the preparation of concrete. on specific technological parameters that ensure the required quality of materials and structures and products. Requirements for concrete preparation (binders, additives, aggregates), its composition and technological parameters should be determined based on the basic characteristics of concrete quality, the function of the structures and their operating conditions. The strength of concrete is determined by their guaranteed values - classes.

Strength class of concrete - the strength of the base samples of concrete, determined in accordance with applicable standards, is determined at the age specified in the design. The brand of concrete for frost resistance is determined by the number of alternating freezing cycles in the water or saline solution in which the control samples are held, which are prepared in accordance with the requirements of applicable state standards and tested for frost resistance.

Discussions: The requirements for compressive strength, bending and indirect tensile strength are the same for the bottom layer and the top layer of concrete. However, the composition of concrete may vary depending on the classification curve, the maximum aggregate volume, the cement composition, and the requirements for the mineral aggregate. While approximately 350 kg of cement per 1m³ is sufficient for the lower layer concrete, 420 kg of cement per 1m³ will be required for the upper layer of concrete. The top layer is made of gravel materials with a size > 2 mm. It is well-regarded to maintain the noise-reducing properties of the concrete coating and to ensure that it is resistant and durable in the long run. , the surface cutting motor is compatible with SP 1500 and is uniformly applied to the newly leveled surface by a texture cleaning machine (TCM) manufactured by Wirtgen. Depending on the current climatic conditions, the concrete will be exposed to the surface with a broom a few hours after laying the coating. The result is a smooth surface with a large number of profile peaks and a texture that steadily reduces tire noise.

Requirements for components of road concrete (technological parameters of quality of concrete mixes should correspond to GOST 7473 and additional requirements of work design):

Material	Demand
Cement	<i>Gost 10178-85</i>
Sand	Gost 8736-93, Gost 26633-91
Pebble	Gost 8267-93
Water	Gost 23732-2011
Extras	Gost 24211-2008

Analysis and results: The bottom layer of concrete is thrown directly in front of the paver. The top layer of concrete is delivered to the second machine via a conveyor. For this purpose, the concrete is filled directly from the truck into a material container or intermediate container - where each contractor uses its own process. The procedure is then the same in all cases: the conveyors and the pipe at the end of the conveyor lower the top layer of concrete into the fully compacted bottom layer of concrete behind the first paver. Disadvantages of this method The biggest difficulty with this method is related to logistics: Two different materials are needed and they need to be in the right place at the right time and in the right

quantity because they need to be wet. We consider it expedient to use the following technological method when carrying out repair works on cement roads due to the displacement of the top "cream" (cleaning).

- Definition and cutting of defective areas in the coating. The recommended scheme for marking and cutting defective areas in the coating is shown in Figure
- When the depth of the crack is more than 10 mm, the edges of the previously damaged concrete layer are removed from the damaged surface using diamond-tipped round disc cutters and cleaned of debris.

Conclusion. In the process of analyzing and improving the technology of construction and repair of cement concrete pavements on highways, I was convinced that the roads in Uzbekistan are in a very poor condition. I can say that if we look at the number of developed countries, we can see that 60% of public roads in the United States have been converted to 38% in Germany and 46% in Australia to cement-paved roads. Now let's look at the public roads of Uzbekistan, if there are more than 184,000, of which only 1% are cement-concrete roads, then we know that we are also using cement roads will be expedient if we spend. The service life of our cement-concrete roads is declining due to the fact that they are located in mountainous areas. To solve this, we need to apply the fact that because it is a mountainous area, the mountain rises and as a result of the mountain growth, our roads are damaged. We all know that cement is good for compaction but does not work well for elongation, so it is necessary to cut the concrete every 5m².

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