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Analysis Of Problems In The Laying Of Cement Concrete Squases

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Annotation. *This article discusses issues such as bitumen, portland cement, cement, sand, gravel, concrete, cement concrete, limestone, cement concrete preparation technology, cement concrete brand, cement concrete elasticity, coating temperature shock, cement concrete improvement and use, and advantages and technology of cement concrete coatings.*

Keywords: *clinker, import, export, cone, gravel, concrete, cement concrete, paving, asphalt concrete, limestone, brand, powder, sand, bitumen, local.*

I. INTRODUCTION.

Today, due to the lack of road bitumen in the country, bitumen is imported from neighboring Russia, Kazakhstan and Turkmenistan, which affects the situation on the roads. Our country is a world leader in the production of construction cement. Given the fact that in our country there are local resources of gravel, sand, gravel, our cement-concrete roads are economical and we use our own cement. Also, on October 2, 2019, President Sh.M.Mirziyoyev called for a gradual transition to cement-concrete roads in the construction of roads in the selector of the meeting dedicated to the development of road infrastructure and attracting investment in this area. , the task of construction, reconstruction and overhaul of roads with the introduction of innovative technologies on the basis of international standards.[1]

II. THE MAIN PART

Cement-concrete pavements on highways are structures that operate under the effects of re-loading of vehicles, changing the temperature and humidity of the pavement and road surface in complex stressful conditions. In addition, internal stresses are characteristic of cementitious materials due to the diversity of the structure of these materials, as well as the processes of formation and destruction of a continuous structure. Improving the resistance of road concrete to operational impacts is directly related to improving its physical and mechanical properties and structure.[2]

The formation of the structure and properties of road concrete depends on many factors: the type and quality of starting materials, the designed composition of concrete, chemical compounds used, preparation technology, laying and compaction of concrete mix, paving reinforcement efficiency, concrete maintenance quality and so on. Among these, it is important to select the materials used and evaluate their quality.

Portland cement is one of the main materials that determine the properties of concrete for concrete mixes and road construction. 3-5% gypsum and 15% hydraulic additives are added to the clinker fired at 1450 ° C by mixing a certain amount of Portland cement with a mixture of limestone and clay. Clinker is a semi-finished product made of porous aggregates. The inclusion of gypsum, phosphogypsum and borogyps in the cement controls its hardening. More than 400 brands of cement are used in road construction. This is because no cement other than Portland cement can be used in road construction. If we add the cement used in construction, the quality will decline and it will not give the required brand. Concrete mixes also require special attention to water. Too much salt in the water will ruin the road we built.[3]

III. RESULTS

When laying the cement concrete pavement, there are special requirements for the transported concrete itself. The transport time of the mixture should be about 30 minutes at 20-300C and 1 hour below 200C. When transporting the concrete mix, the main focus should be on the setting time of the mix. In this case, the hardening of the mixture takes into account the time of pouring and laying on the concrete mixer. The reason is that if our cement concrete starts to harden, we can't add water to it. When water is added, the water-cement ratio changes and the state of the mixture changes. In this case, before starting the laying, it is necessary to ensure that at least 15 m3 of the mixture is delivered to the concrete mixer within 30 minutes. The reason is that if there is a break, the laid concrete will start to harden, as a result of which it will not bond well with the laid one and may cause cracking. Cementitious pavement can cause problems in rows if it is built on two or more rows of strips. Asphalt pavers do not cause any problems. When laying the asphalt pavement, the temperature of our transported asphalt concrete should not be less than 1200C. Asphalt concrete is transported over long distances in its own special transport. It has a heater in a special vehicle that prevents our asphalt from cooling down. If we analyze, we can see that laying cement concrete is more difficult and labor-intensive than asphalt concrete. There are two main technologies for the construction of cement concrete pavements: using rail-formwork and sliding formwork. Sliding molds are popular because of their advanced technology. Today, Germany is one of the leading manufacturers of concrete pouring equipment and is widely used in road construction in our country. Cement concrete pavers are divided into small, medium and large class concrete pavers, which are built in 6, 12 and 16 meter width types. Their modern models allow for a large change in the width of the pavement being built, but the slow movement of the concrete pavers during operation leads to a prolongation of the road construction. One of the concrete mixers used in road construction in our country, SP-1500, has a maximum speed of 20 m / min. As far as we know, the main part of the country's roads is asphalt. The type of asphalt pumps used

in our country today is increasing day by day because the speed of asphalt pumps is faster than concrete pumps. XCMG, one of the asphalt pumps used in road construction in our country, has a maximum speed of 25 m / min. This shows that the efficiency of the asphalt is high.

IV. CONCLUSION

This means reducing the import of Portland cement by adding microcirculation to the cement produced in the country and preparing a quality mix for the highway. The availability of the main sources of raw materials (95%) for the production of this mixture in our country is gravel, sand, gravel, limestone, which is a guarantee of economic efficiency. The use of microcirculation powder not only brings significant benefits to the economy of our country, but also opens up opportunities for export and the construction of cement-concrete roads in foreign countries. In particular, if we build cement concrete coatings using microcirculation, we achieve the following efficiencies:

- Increased elasticity of cement concrete coating;
- Increased frost resistance;
- Water permeability increases by 50%, sulfate resistance increases by 100%;
- Save up to 40% of cement;
- Increase the service life of cement paved roads;
- Increased economic efficiency.

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