

PROBLEMS ENCOUNTERED IN THE LAYING OF CEMENT CONCRETE PAVEMENTS.

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Annotation. The article describes the process of repair of surface layers of cement concrete coatings, preparation for repair of the coating surface, the process of eliminating the migration of cement "cream", materials for repair of the surface layer of the coating, preparation for repair of the coating surface. works, methods of preparation of the mixture are described.

Keywords: cement "cream", coating, repair, reconstruction, technology, guide, concrete, diamond, saw, cement mix, warning, preparation, development, road, process, artificial.

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. President Mirziyoyev also stressed the need for a phased transition to cement-concrete roads in the construction of roads in the selector of the meeting on October 2, 2019, 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]

MATERIALS AND METHODS

In preparing the article, the methods of studying and nationalizing the experience of foreign countries, studying and directing the possibilities of technologies, logic and generalization were used.[2]

THE MAIN PART

In order for a concrete road to withstand loads and be in good condition for many years, you need to follow the technology when laying it and take care

during the work. It is not clear which one is better: concrete or asphalt. The use of a particular material will be decided taking into account the specific requirements for the road and the capabilities of the contractors. [3] When you activate any of them, a drop-down menu called Functions will appear on the screen. This occurs in accordance with the above workflow. After activating the selected function, a second set of buttons called Processes will appear [7].

The construction practice of cement concrete pavements has shown that it is very difficult to prevent the formation of this or that defect and it is impossible to completely avoid it. There are many factors that affect the formation of cracks, cracks and peeling. The causes of defects and disorders are often the simultaneous exposure of several factors. The main causes of cracks and other defects are:

1. Wrong choice of concrete mix:

- Wrong choice of materials and inappropriate proportions of components;
- The use of mixtures in the wrong fraction, for example, the use of (5 ÷ 20) mm fraction instead of (5 ÷ 10) mm and (10 ÷ 20) mm fraction of gravel;
- Increase or decrease of water-cement ratio;
- Excessive amount of cement and part of the mixture;
- Wrong choice of chemical additives and overdose.

2. Disorders in the preparation of concrete mix:

- Deviation from the prescribed prescription, dosage inaccuracy;
- The use of low-quality or other types of fillers, primarily of non-optimal content and an increase in the amount of dust and clay particles;
- Use of materials not specified in the recipe;
- Do not mix components well until homogeneous;
- Increased temperature of concrete mix.

3. Poor construction conditions, violation of the technology of laying the concrete mix and inconvenient operating conditions:

- ❖ Inadequacy of the technical solutions adopted in the design (failure to take into account the technical capabilities of the concrete mixer, the lack of polythene film under the concrete coating, resilience and compensatory joints);

- ❖ Uncertainty of the coating account;
- ❖ Ignoring climate and other conditions of places;
- ❖ Over-compaction and layering of concrete mix during laying;
- ❖ Excessive leveling, especially on metal leveling;
- ❖ Rapid drying (dehydration) of the concrete surface in dry hot climates and non-compliance with the rules of care during the initial and periodic hardening of concrete;
- ❖ Untimely and incorrect organization of stitches (1- picture);



1- picture. Cracks in the seams.

- ❖ Temperature fluctuations during the day;
- ❖ Loading when coatings are not sufficiently bonded to the substrate;
- ❖ Improper use of chemical reagents that increase cold tolerance;
- ❖ Intensive impact and repetition of wheel loads;
- ❖ Use of de-icing reagents in the first year of operation of the coating.

RESULTS

Laying of the concrete mix in the structure occurs when the heavier aggregates sink to the lower part of the slab section and the relatively lighter cement-sand mixture is squeezed to the upper part. As a result of layering of the concrete mix, near the surface, in a high water-cement ratio, a layer saturated with cement laitance is

formed. The level of cement laitance was observed to be high, especially when the slabs were placed on a polyethylene film underneath. In this case, the upper part of the plate dries faster than the lower part, and the shrinkage is different, leading to hardening. Taking into account the geographical location of the country, the development of a network of modern roads is a priority task in increasing the competitiveness of the economy, developing the transport potential of the country and expanding export opportunities [6].

Most often, the hardening effect is manifested during the initial hardening of concrete. However, practice shows that the plate can withstand a long time. For example, in the construction of the cement-concrete road of the A-380, the slabs were later damaged. On this route, a few months after the opening of the road, in section B2, in the concrete slabs laid in October 2011, in the first decade of 2013 (April), a large longitudinal crack was formed in the layer.

CONCLUSION

In conclusion, we can say that if we start repairing cement concrete pavements, we will be able to repair cement concrete pavements in our country. Because this has not been done in any country in the world today Today, due to the declining service life of our roads, the service life of cement paved roads is longer than that of asphalt paved roads, and in most developed countries, the demand for cement paved roads is growing. In particular, if we introduce the repair of cement concrete pavement, we will achieve the following results:

- Facilitate the repair of the coating surface;
- Eliminate the migration of cement "cream";
- Increased longevity of the coating;
- Increase good adhesion of asphalt concrete to cement concrete;
- Increased ability of the cement concrete coating to adhere to the temperature joints.

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