



ANALYSIS OF THE MAIN CAUSES OF BREAKDOWN OF MACHINE PARTS

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Abstract. Today, one of the main conditions for the rapid development of the machine-building industry in our republic is technical modernization, or in other words, the introduction of new techniques and technologies based on the achievements of scientific and technical development into the production processes of machine-building. In our republic, comprehensive measures are being taken to increase the volume of road construction, construction, and excavation works in mining, to reduce the material and energy costs of production, and to effectively use widely used technical means, and certain results are being achieved. Currently, in the development of production, there is a way to use powerful mobile equipment that can perform several operations at the same time. We can give an example of new cars produced in Andijan, Tashkent and Samarkand. This, in turn, increases the demand for long-term operation of machines without breaking down. Therefore, the quality and reliability of new and refurbished cars are becoming more important today.

Key words: rock, soil, excavator, erosion, friction, resource, mechanism, restoration, coating,

The main part. Abrasive wear is the process of mechanical material loss (such as stone, metal, or other hard surfaces) caused by friction or the presence of hard particles moving between or across surfaces. This phenomenon typically occurs due to the impact of hard particles or abrasive forces, leading to the gradual degradation of surfaces. Increasing the resource of wear parts of rock-soil digging machines in the fields of road construction, construction, mining and land reclamation, especially excavator bucket teeth, which make up the main part of them, is an urgent issue. Therefore, in the conditions of our republic, the types and mechanical properties of rock-soil, as well as the current state of road construction and the use of rock-soil digging machines were studied and analyzed. Their serviceability is maintained through periodic maintenance and repair of existing machines. The importance of such an event can be seen from the following examples. Maintenance and repair costs for existing machines are relatively high, which leads to a decrease in the efficiency of the use of machines. This makes it necessary to find ways to improve the maintenance and repair of cars and to reduce their costs.

Until now, it was required that the resource of a car after repair should be 80% compared to a new one. And now this indicator has not satisfied the users of the technology. The task is that the resource of tractors and cars after repair should be as new and even more. In practice, several times more equipment than the number of new cars purchased every year is returned to use through the repair of cars.

In Central Asia, cars are much more expensive due to objective reasons such as the high dustiness of the air, direct contact of parts with stone and soil, and the difficulty of

providing them with constant and complete service. works in harsh conditions. And these create a demand for the repair of cars, and for this a large amount of money is spent.

The scientists of the field have stated that the main reason for the decrease in the reliability of the machines, as a result of which there is a demand for their repair, is the eating of details.

The results of their theoretical and practical studies on the friction of details and the resulting corrosion serve as a basis for determining measures to combat corrosion of details.

Today, in the restoration of the eaten details, along with the restoration of its size, new and more serious tasks are being put on it. These have a new meaning and technological content, and are aimed at solving the main problem of improving the quality of repaired equipment, reducing the costs of repair and their use.

Restoration of worn parts usually consists of the process of covering their working surfaces with a layer of material in order to restore the nominal size within the specified tolerance. This feature allows to significantly improve the physico-mechanical and technological properties of the detail by covering its rapidly corroded surfaces with a layer of material whose corrosion resistance is many times higher than that of its previous surface during the restoration of details. However, in the reconstruction of the eaten details, this feature is not given enough attention.

Therefore, in order to increase the effectiveness of the use of existing techniques, it is one of the urgent issues to study the technologies of increasing the corrosion resistance of the friction surfaces of the parts and to produce a new improved technology based on them.

The technology developed in this work allows to increase the corrosion resistance of the external working surfaces of the parts. This, to a certain extent, ensures the long-term operation of machines, which is one of the important problems facing the national economy of our republic. Taking into account the interdependence of the cost of repair work and the labor, material, and energy resources spent on it, their increase from year to year is very harmful for the national economy.

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