

7. Topalidi, V. A. Wear resistance of specialized vehicles tires on quarry roads / V. A. Topalidi, U. B. Yusupov, A. M. Babaev // International journal of mechanical and production engineering research and development (IJMPERD). Vol. 10, Issue-5. Edition: Oct, 2020. – P. 643–658.

8. Топалиди, В. А. Нормирование ресурса шин типовых автомобилей в карьерных условиях / В. А. Топалиди, У. Б. Юсупов // Автомобильная промышленность. – М. : 2019. – № 11. – С. 27–29.

9. Топалиди, В. А. Износостойкость шин специализированного автотранспорта в зави-

симости от категории крепости карьерных дорог / В. А. Топалиди, У. Б. Юсупов // Автомобильная промышленность. – М. : 2020. – № 12. – С. 20–22.

10. Цыценко, Н. А. Исследование зависимости эксплуатационных затрат на движение автомобиля от скорости движения и величины уклона дороги / Н. А. Цыценко // Повышение экономической эффективности строительства и эксплуатация автомобильных дорог Казахстана. – Алма-Ата, 1971. – С. 48–56.

UDK 629.114

BOIKOV Vladimir P., Doctor of technical Sciences, Professor,
Head of the Department «Tractors»¹
E-mail: trak_atf@bntu.by

ABDURAZZOKOV Umidulla A., Ph. D. in Engineering, Associate Professor,
Head of the Department of «Vehicle Engineering»²
E-mail: rektorat@tstu.uz

ANVARZHONOV Akmaljon A. ugli,
Ph. D. student¹, assistant of the Department of «Vehicle Engineering»²
E-mail: rektorat@tstu.uz

¹Belarusian National Technical University, Minsk, Republic of Belarus

²Tashkent State Transport University, Tashkent, Uzbekistan

Received 15.09.2023

ANALYSIS OF ROAD CONDITIONS OF OPERATION OF MINING DUMP TRUCKS IN THE REPUBLIC OF UZBEKISTAN

In the Republic of Uzbekistan, the mining industry is an integral part of the economy. It is also suitable for JSC NMMC to produce more than 105 tons of gold, more than 700 thousand tons of silver, etc. This article analyzes the road conditions of operation of quarries in the Republic of Uzbekistan. Analyses show that the road conditions of quarry operation are heavy, which is why large-sized tires of dump trucks do not give a guaranteed mileage. Based on the above, a statistical analysis of the mileage of oversized tires is given. This article provides an analysis of road conditions during the operation of special equipment on the example of the Muruntau quarry of the Republic of Uzbekistan. The infrastructure of operating conditions is investigated, the main components of which are road slopes and the condition of the road surface. In particular, the slopes are 15–20 % or more, and the surface quality is the strongest abrasive material – a mixture of ground rocks with metallized inclusions, which leads to intensive wear of the tire tread.

Keywords. road conditions, quarry, slope, duty cycle, oversized tires, wear, soil, highways.

References

1. Career vehicles of the CIS countries in the XXI century / P. L. Mariev [et al.]. – St. Petersburg: Nauka, 2006. – 387 p.
2. Yusupov, U. B. Method for calculation of the influence of the longitudinal slope of the road on the tire life / U. B. Yusupov, A. A. Mukhitdinov, Q. U. o'g'li Urinbayev // *Galaxy International Interdisciplinary Research Journal*. (2023), 11(3). – P.49–59.
3. Yusupov, U. Research of the resource of tires of rotary buses in career conditions / U. Yusupov, O. Kasimov, A. Anvarjonov // *ICPPMS-2021*. Cite as: AIP Conference Proceedings 2432, 030072. – 2022.
4. Dubinkin, D. M. Substantiation of the number and type of tire size for unmanned mining dump trucks / D. M. Dubinkin, A. B. Kartashov, G. A. Harutyunyan // *Mining equipment and electromechanics*. – 2020, No. 3. – pp. 25–33.
5. Goryunov, S. V. Development of a methodology for predicting the durability of large-barite tires of quarry dump trucks: dis. ... Candidate of Technical Sciences – Moscow : Kemerovo, 2021. – 124 p.
6. Yusupov, U. B. Rationing the mileage of NefAZ shift buses in the conditions of «AGMK» / U. B. Yusupov, O. K. Kasimov, Zh. Sh. Narziev // *International, scientific electronic journal «Transport of the Silk Road»*. – Tashkent, 2019. – No. 3–4. – pp. 94–101.
7. Topalidi, V. A. Wear resistance of specialized vehicles tires on quarry roads / V. A. Topalidi, U. B. Yusupov, A. M. Babaev // *International journal of mechanical and production engineering research and development (IJMPERD)*. Vol. 10, Issue-5. Edition: Oct, 2020. – P. 643–658.
8. Topalidi, V. A. Rationing of the tire life of standard cars in career conditions / V. A. Topalidi, U. B. Yusupov // *Automotive Industry*. – M. : 2019. – No. 11. – pp. 27–29.
9. Topalidi, V. A. Wear resistance of tires of specialized vehicles depending on the category of strength of quarry roads / V. A. Topalidi, U. B. Yusupov // *Automobile industry*. – M. : 2020. – No. 12. – pp. 20–22.
10. Tsitsenko, N. A. Investigation of the dependence of operating costs on the engine-the dependence of the car on the speed of movement and the slope of the road / N. A. Tsitsenko // *Improving the economic efficiency of construction and operation of automobile roads in Kazakhstan*. – Alma-Ata, 1971. – pp. 48–56.