

ANALYSIS OF INFLUENCE OF ROAD SURFACE QUALITY ON TRAFFIC SAFETY

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Calculated speed is the most important operational indicator in traffic on roads and serves as a basis for determining the parameters of the technical elements of the road. Estimated speed is determined depending on the category of roads, topography, traffic safety conditions. At the same time, it describes the maximum permissible speed, taking into account the safety of the movement of one car in narrow areas of the road under conditions of normal contact of the wheels with the road. Currently, there is a tendency to reduce the speed of movement in our country, as in foreign countries. According to the Russian scientist V. F. Babkov, the calculation speed during the reconstruction of the highway is lower than the construction of a new road of the same category. A number of scientists (A.K. Birulya, V.F. Babkov) believe that the choice of movement speed should be based on technical and economic reasons, another group of scientists believes that the optimal calculated speed for the construction and use of roads for the calculation period (20 years) believes that costs should be determined based on the minimum amount [1]. Deterioration of smoothness of the road surface leads to a significant decrease in the speed of movement of vehicles, and further deterioration of the flatness slightly reduces the speed of movement.

Determining the level of traffic danger of the road is the primary basic information for road use, proper organization of traffic, as well as development of recommendations

for improving traffic safety or road repair. Currently, the following methods are used to determine the dangerous parts of the car: safety coefficient; fatality rate; yth statistics; conflict situation. One of the main tasks in assessing the quality of road traffic use and traffic safety is to identify the parts of the road or its separate sections that have a significant impact on traffic procedures. traffic accidents often occur in such places. Prof. One of the methods of evaluating road sections in terms of traffic safety. is the safety coefficient developed by V.F. Babkov (3).

The safety coefficient is the ratio of the speed of movement V_{qis} on a certain part of the road to the maximum speed when entering this part, V_{kir} :

$$K_x = V_{qis} / V_{kir}$$

Using the safety factor, a graph of the safety factor is constructed to determine the dangerous section of the road. For this, a linear change of the speed of movement on the examined road is drawn. It is determined by calculating the theoretical speed of a car moving alone, or by driving a specially equipped laboratory car on the road. In practice, the fatality coefficient [2] is often used to determine dangerous road sections. The accident rate is the ratio of the number of accidents in various elements of the plan and section of the road section to the number of incidents on the reference section of the road. The volume of traffic does not exceed 5000 vehicles/day, two traffic lanes, the width of the carriageway is 7.5 m, the width of the road edge is 3.0 m, it does not pass through a residential area, the height of the rise does not exceed 1.0 meters, in plan and section A straight road section whose view is provided is called a standard road section. An accident on such a road is considered to have been caused by the driver's, pedestrian's negligence or the vehicle's failure [2].

According to statistics, accidents are sometimes recorded as a result of technical malfunctions of cars. In this, the condition of the vehicle's brakes, control system, tires, drive units and mechanisms is mainly taken into account. A faulty heating and cooling system in a car, an uncomfortable position of the driver's seat, an incorrectly installed rearview mirror or a malfunctioning windshield wiper do not at first glance seem to be the cause of an accident. it seems However, these shortcomings worsen the

psychophysiological condition of drivers and are the direct cause of accidents. Unfortunately, in practice, in most cases, such factors are considered not to be a technical fault of the car, but caused by the negligence of the driver. When analyzing the 10-year accident data of the Ministry of Internal Affairs and Communications of the Republic of Uzbekistan, it was found that the number of accidents caused by the failure of vehicles is 0-0.31% of their annual amount. According to the results of the previous union-level analysis of the National Security Agency, it was determined that 3-5% of the total number of incidents caused by car malfunctions were found to be 3-5%. The main guarantee of safety is the choice of the driver's behavior in accordance with the rules of the road. As noted by Professor V.F. Babkov, 75÷80% of accidents are caused by the fault of drivers. If the accidents caused by drunken drivers are excluded, at least 45% to 50% of accidents are caused by the driver's erratic movement. According to the long-term information on accidents caused by the fault of drivers in the Republic of Uzbekistan, the number of accidents caused by the fault of drivers is 81.8-90.6% of the total number. There is a big difference between the indicators determined by the researchers about the role of road conditions in the occurrence of accidents and the indicators presented in the state statistics. For example, in the 1970s and 1980s, researchers indicated that road conditions play a 65÷75% role in the occurrence of accidents [2], while in the statistics of the former Union 27 it is 7.1-12.1%.

In Uzbekistan, this indicator is defined as 0.27÷5.22%. As a result of the large-scale research carried out on highways in 1991, the employees of the former All-Union Research Center for Traffic Safety stated that road conditions are the direct or indirect causes of 40÷45% of accidents [2], but according to state statistics, the former indicators are recorded at a low level. For the highways of Uzbekistan, it is 0÷01%.

The methods of determining the level of danger of road sections, considered in the previous sections, are mainly based on the analysis of accidents, and in one case or another, as a result of a detailed study of the incidents that occurred on different parts of the road, certain conclusions were reached. Below, we will consider

determining the level of danger of road sections, depending on the situation before the occurrence of an accident. Among the participants of the movement, it is understood that it is a conflict situation that they continue their actions in a dangerous situation where an accident occurs in certain road conditions [2]. The conflict situation method is mostly used to determine the degree of danger of level crossings, curved sections of the road in plan and longitudinal section, as well as places of sudden braking. For this purpose, a simulation model of movement is created by observing the change in the traffic pattern on a real road section or using ehm.

Tracking is done during the hour with the highest traffic volume using the following methods:

- A car moving along the flow of traffic passes through the section of the highway that is being tested in the laboratory many times (6-10 times). In this case, the observers take into account the places of the driver's actions to apply sharp brakes, change the direction of movement and prevent other accidents;

- in places where accidents are likely to occur (near level crossings, railway crossings, curves with a small radius in the plan, etc.), measuring sudden changes in traffic with the help of observers at posts located along the road;

- Using sensors installed in a moving laboratory vehicle, recording changes in road speed and directions in "samopitses".

Using the conflict situation method, to determine the level of danger of a road section, it is necessary to draw a graph of the change of speed and direction on all road sections with the help of a car laboratory. In this method, determining the level of dangerousness of the road is measured by the value of longitudinal and transverse negative acceleration of the car in one or another position. The conflict situation is divided into three types according to its level of danger: light, medium and critical. light - when the driver approaches a conflicting point from a long distance, it is possible to understand the dangerous situation and assess the direction of movement of other traffic participants in time. average - it is characterized by the occurrence of an unexpected danger or due to an incorrect assessment of the traffic conditions at the

beginning. critical - the driver can avoid an accident by moving at a high speed on a short section of the road.

LITERATURE

1. I.S. Sodikov/ *Transport and operational indicators of highways / Textbook / T.-TAYLKEI. - 2019. 216 p.*

2. Azizov Q.Kh. *Ensuring road safety. Instruction manual - 94 pages. T.: -2019*

3. Nazarov A.A. *Principles of education that develop an innovative approach to engineering professional activities / International Journal of Early Childhood Special Education (INT-JECSE) / <https://www.iiste.org/journals>.*

4. A. Nazarov and others. *Methods for Conducting a Course Project on Machine Parts / TEST IN Gineering management. / https://ejmcm.com/article_3873.html May – June 2020. ISSN: 0193-4120 Page No. 26595 – 26598.*

5. Nazarov A. A. *Principles of education that develop an innovative approach to engineering professional activities. / European Journal of Research and Reflection in Educational Sciences. Vol.8No.8,2020 ISSN 2056-5852. / <https://www.idpublications.org/wp-content/uploads/2020/07/Full-Paper-PRINCIPLES-OF-EDUCATION-THAT-DEVELOP-AN-INNOVATIVE-APPROACH-TO-ENGINEERING-PROFESSIONAL.pdf>.*

6. Nazarov A. A. *Completion of the course project on the subject "Machine details". / Oriental Renaissance: innovative, educational, natural and social sciences / <https://cyberleninka.ru/article/n/completion-of-the-course-project-on-the-subject-machine-details>.*