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A STUDY OF THE SPEED OF MOVEMENT OF VEHICLES ON HIGHWAYS

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Abstract
The master road serves as a basis for indicating the most important operational indicators of the transport process on roads, as well as technical service parameters. The design is based on the category of roads, traffic conditions, and terrain. At the same time, it characterizes the maximum permissible speed of movement of one vehicle on the road with normal contact of the wheel with the road, while maintaining the vehicle.

Keywords: Highways, vehicles, traffic speed, frequency, curvature, distance, categorization, speed.

Introduction

On highways, speed is measured using simple speed measuring devices such as stopwatches, headlights, bars, topons, as well as various automatic sensors, as well as the film method. I figured out the speed of movement using a silencer, which is the simplest and most convenient. To do this, I have set a distance on the traffic section of the track with a length of 75 m. I will install a pointing stick on the roadside to accurately mark the entry and exit times of cars into the observation section. Speed monitors are positioned at a distance of 10-15 m from the side of the road and start the minute meter when entering the car measuring lane and stop it when the car exits the measuring lane. The obtained results are entered into a specially prepared table. [2]

The initial data obtained about the speed of movement is analyzed by the method of mathematical statistics. To do this, the speed is divided into categories as a result of observation first. After that, the velocity data corresponding to each category is compiled, and then the frequency is calculated. Frequency is the number of cars in a category. Frequency is determined using frequency. Frequency is the ratio (expressed as a percentage) of the value of each frequency of a frequency to the sum of the total frequency. And the sum of the frequency consists of the additions of the frequency in each succession. Entering the shown values into the table, using which the distribution and aggregated curvature are plotted, and then the velocity values are analyzed.

Key: A multiplicity velocity-modal velocity is determined using the distribution curve. And with the help of the aggregate curve, the guaranteed velocity values of 15%,50%,85%,95% are found.

Velocities determined from the summed curvature can be analyzed as follows. At the same time, 15% speed should be taken as the lowest speed in the organization of the movement, and with its help the minimum speed is limited and the prescriptive mark of .4.7 is set. The speed value at 50% supply indicates the average value of all cars in the flow.Road signs are set and sign lines are drawn based on the speed at 85% supply.Speed at 95% supply is assumed to be equal to the calculated speed, this value is used in the calculation of road elements. I estimate the modal velocities and provided speeds for each road section based on the task. [1]

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Table 1

Categorization (km/h	Number of recurrences	Density %	Aggregate Density %
15-20	6	5	5
20-25	11	9,1	14,1
25-30	18	15	29,1
30-35	19	15,8	44,9
35-40	22	18,3	63,2
40-45	15	12,5	75,7
45-50	12	10	85,7
50-55	9	7,5	93,2
55-60	5	4,1	97,3
60-65	2	1,6	98,9
65-70	1	0,83	100

Table 1 (Recording of densities and aggregated densities by categorization)

After categorizing the velocities, we record the number of repetitions and to find the density results by multiplying the number of repetitions by the total number of cars (120) by 100% and plotting a graph using categorization and density, through this graph we found the modal velocity. [3]

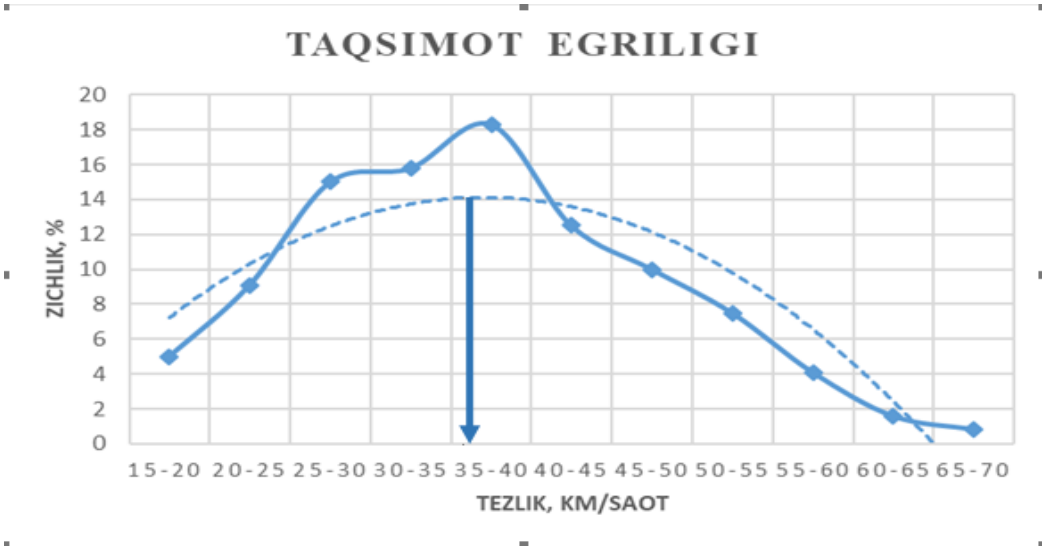

Figure 1 (Distribution curve)

Modal velocity(Mod V)2.2.1 is a speed of 36 km/h, as we can see in Figure 2.2.1.

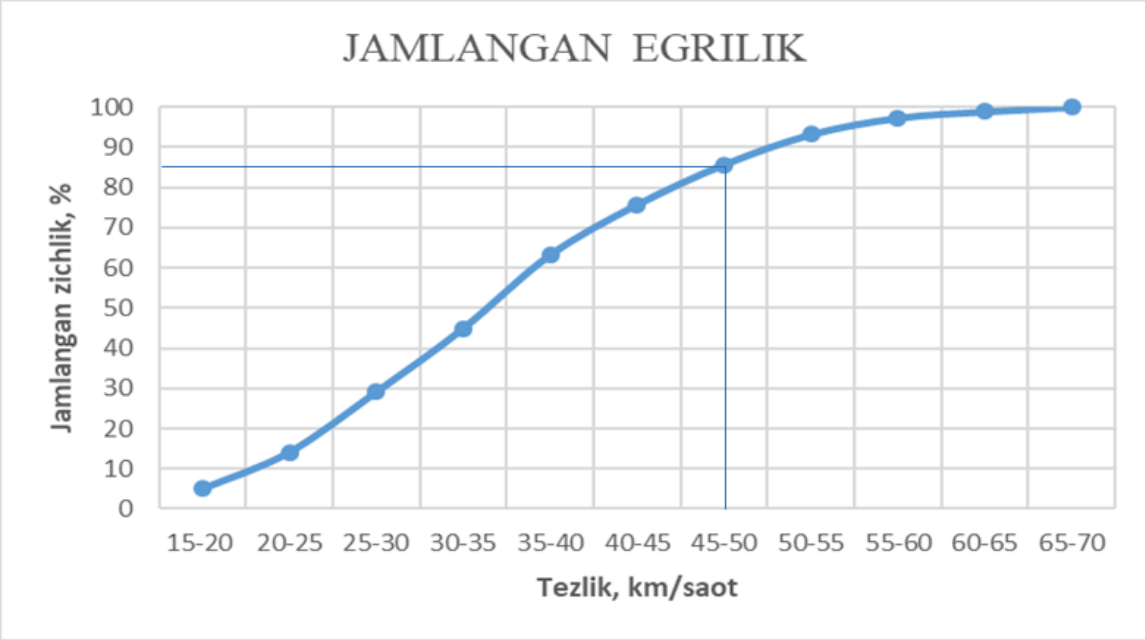

Figure 2 (Summed Curve)

From the summed curvature graph (Figure 2.2.2), we determine the velocity V 85 at 85%. We found that V85=48 km/h. When the speeds were studied, I found V_{mod}=36 km/h and $V_{85=48}$ km/h.

2) 2-Obektimiz Uchun [5]

Table 2

Categorization (km/h	Number of recurrences	Density %	Aggregate Density %
15-20	15	12,5	12,5
20-25	18	15,0	27,5
25-30	24	20,0	47,5
30-35	17	14,2	61,7
35-40	14	11,7	73,3
40-45	11	9,2	82,5
45-50	8	6,7	89,2
50-55	6	5,0	94,2
55-60	5	4,2	98,3
60-65	2	1,7	100,0

Table 2 (Record of densities and aggregated densities by categorization)

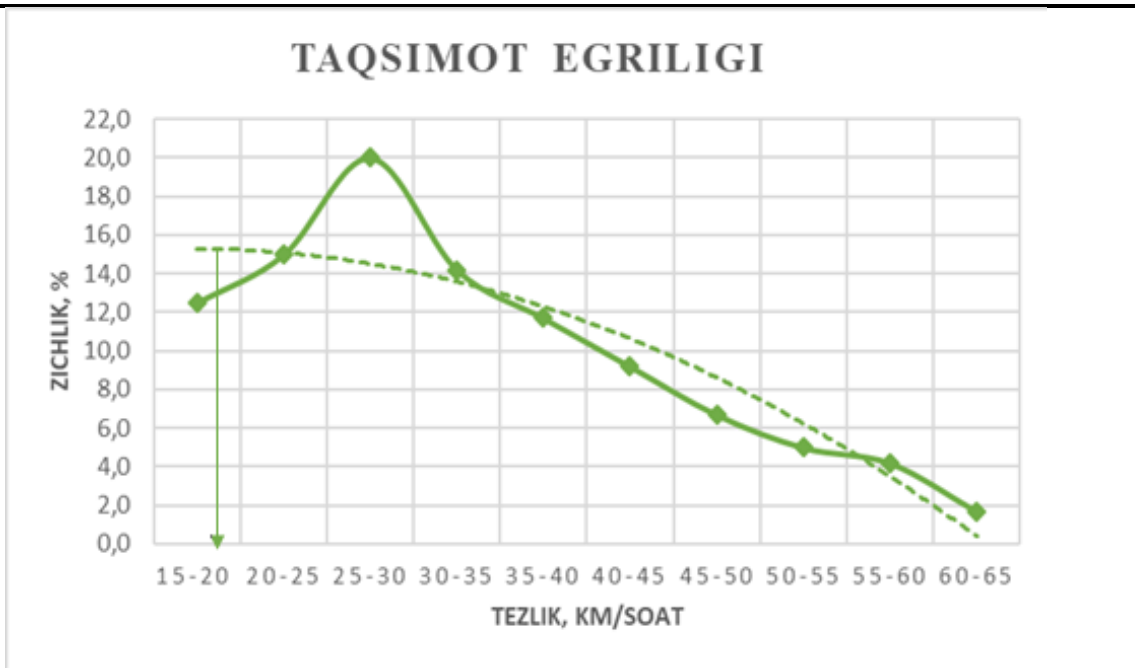

Figure 3 (Distribution curve)

The modal velocity (V_{mod}) is 18 km/h, as we can see in Figure 2.2.3. [7]

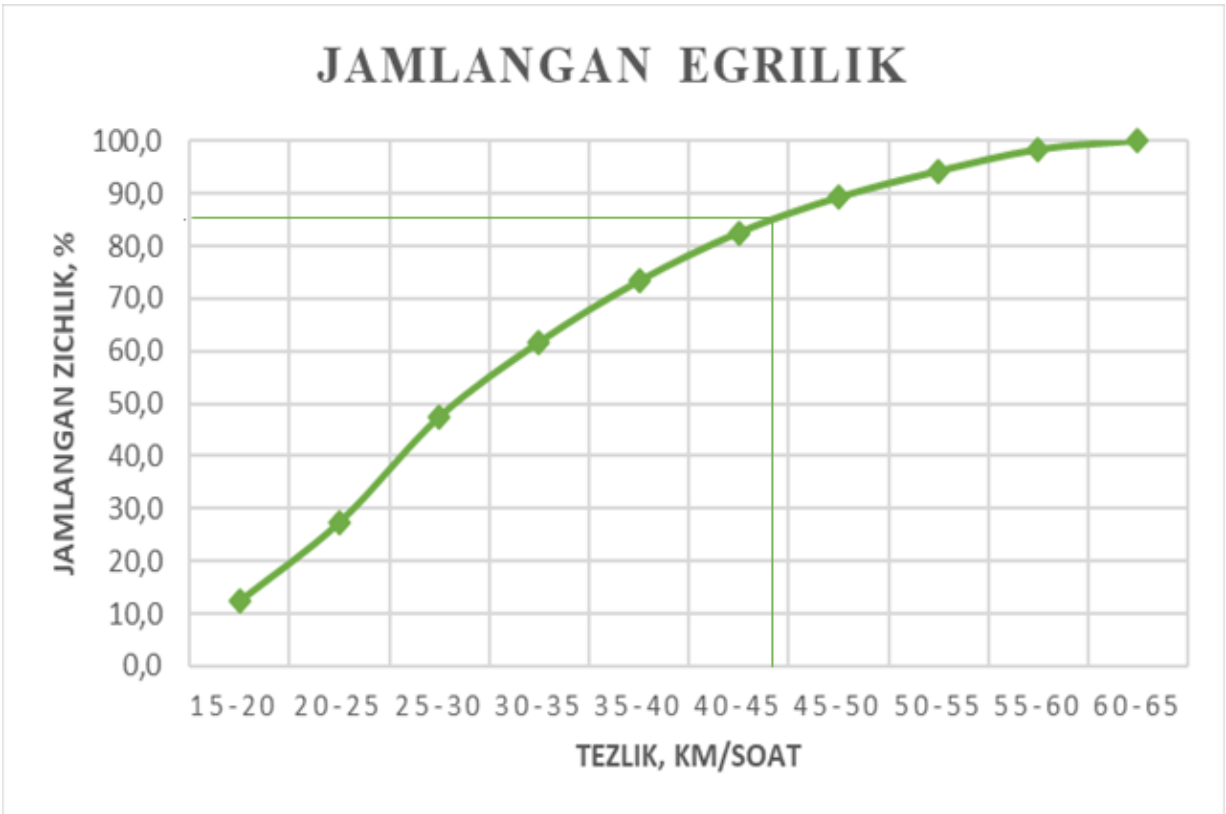

Figure 4 (Summed Curve)

From the summed curve graph (Figure 4), we determine the velocity V 85 at 85%.
We found that V85=44 km/h. When the speeds were studied, I found V $_{mod}$=18 km/h and V$_{85=44}$ km/h.
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Categorization (km/h	Number of recurrences	Density %	Aggregate Density %
15-20	10	8,3	8,3
20-25	12	10	18,3
25-30	23	19,1	37,4
30-35	19	15,8	53,2
35-40	16	13,3	66,5
40-45	14	11,6	78,1
45-50	12	10	88,1
50-55	8	6,6	94,7
55-60	6	5	99,7
60-65	1	0,83	100

Figure 3 (Recording of densities and aggregated densities based on categorization)[4]

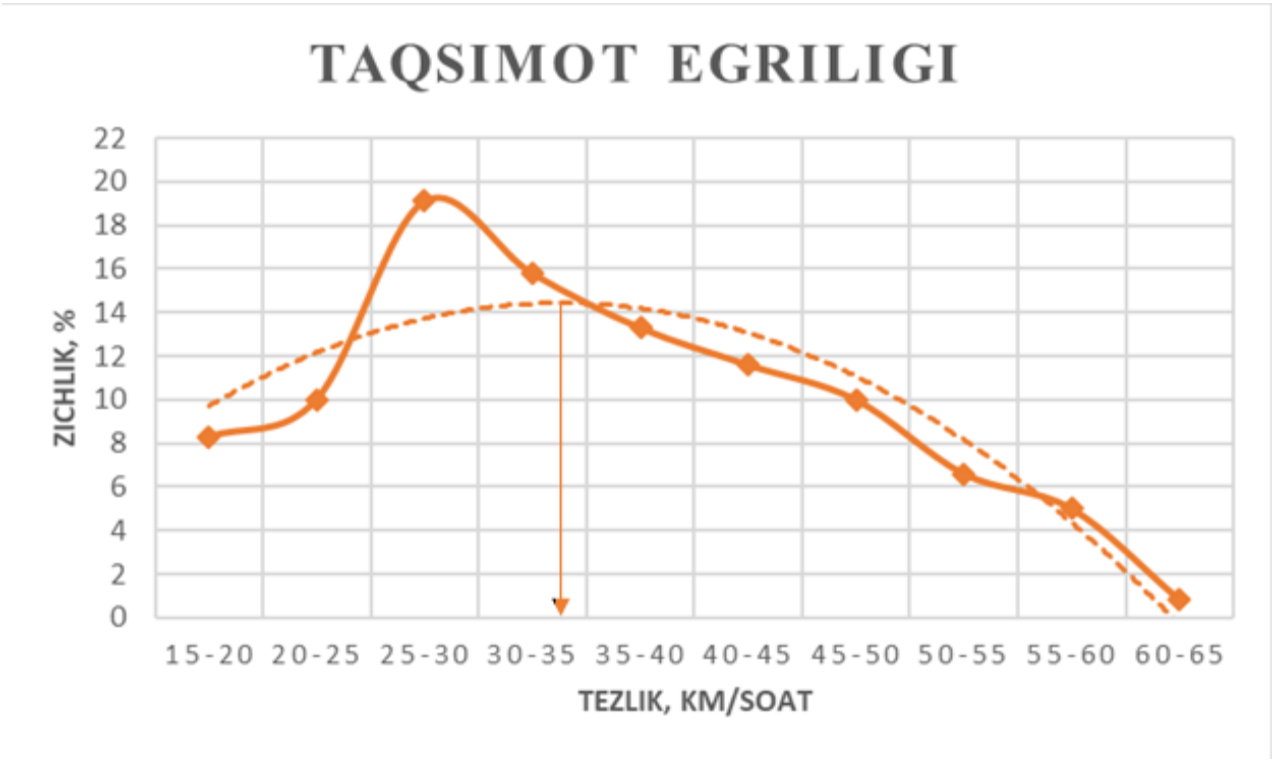

Figure 5 (Distribution curve)
The modal velocity(Vmod) is 34 km/h, as we can see in Figure 5.

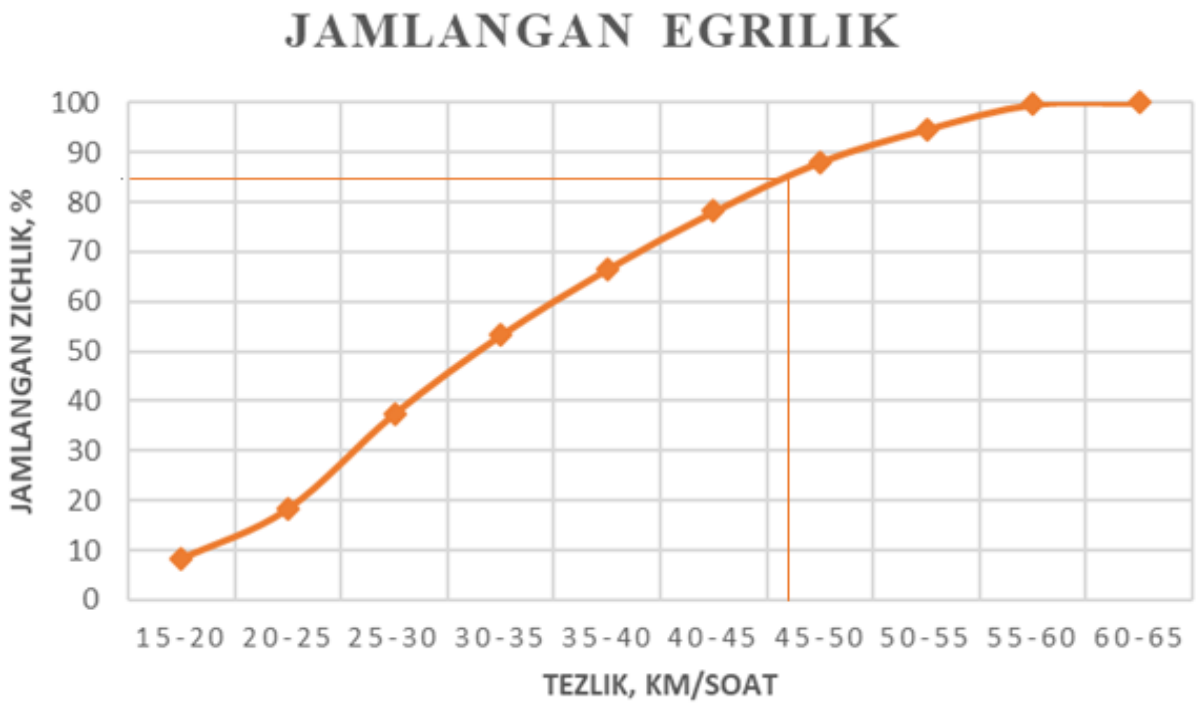

Figure 6 (Summed Curve)

From the summed curve graph (Fig. 6), we determine the velocity V 85 at 85%.
We found that V85=46 km/h. When the speeds were studied, I found V_{mod}=34 km/h and $V_{85=46}$ km/h.[6]

Conclusion:

Highway–driver's place of work. For this reason, it is important for drivers to study the requirements of the roads and their opinion on the speed of movement. The trip can be business and business, personal business, leisure or excursion. Such a division is necessary to determine the functional purpose of the highway. The speed of movement is divided into necessary, real, safe (according to the driver's opinion), maximum and minimum. For high comfort and comfortable travel, the driver is chosen by the desired speed of movement in free conditions. Its value depends on many factors: the purpose of the trip, the distance, the driver's condition, qualifications and experience, road surface condition, geometric elements and on-the-road planning solutions. Deviation from the necessary transport conditions (for example, failure to reach the travel destination on time) causes the driver a sense of reduced comfort and comfort, and sometimes irritability that can lead to irreparable errors and road accidents. Forecasting the state of traffic flow can be done by analogy. At the same time, with the method of comparison, individual indicators of the state of the traffic flow can be predicted. The energy method will be more efficient to predict the integrated indicators of traffic flow states.

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