EduVision: Journal of Innovations in Pedagogy and Educational Advancements
Volume 01, Issue 04, April, 2025
brightmindpublishing.com
ISSN (E): 3061-6972

EVALUATION OF THE PAVEMENT ROUGHNESS OF AMIR TEMUR STREET IN TASHKENT

Isayev Jahangir Azamat o‘g‘li,
Assistant, Tashkent State Transport University Uzbekistan, Tashkent
E-mail: isayevjahongir96@gmail.com

Abstract
This article presents the development of recommendations based on the results of an assessment of the transport and operational condition of city streets. The transport and operational indicators include the following:
 Roughness of the road surface;
 Pavement strength;
 The coefficient of friction of a vehicle wheels with pavement;
 Speed of cars.
We evaluated the condition of Amir Temur Street in Tashkent based on the pavement roughness indicator among these parameters.

Keywords: Pavement, surface course roughness, 3 - meter straightedge, Amir Temur Street.

Introduction

The roughness of the pavement can be determined using impact meters of various modifications: Rafometer TED-2, TXK-2, PKRS-2, three-meter straightedges and levels. The roughness of the pavement on Amir Temur Street (from Khalka Road to the Milliy Bank opposite is 4.8 km) was measured using a 3-meter straightedge.
To measure the roughness of the pavement, a 3-meter straightedge is laid on the surface three times at each point in the direction of the traffic lane being studied, following the tracks of the vehicle wheels.
The indicator of roughness is the gap between the straightedge and the cover, which is the size of the straightedge at five points marked every 0.5 m.
The data in Table 1 below were used to evaluate the flowability standards of various pavements.

EduVision: Journal of Innovations in Pedagogy and Educational Advancements
Volume 01, Issue 04, April, 2025
brightmindpublishing.com
ISSN (E): 3061-6972

Table 1

Rating	Smoothness standards for pavement types when measured using a 3-meter straightedge.								
	Improved capital			Improved lightweight			Passerby		
	Number of cracks %		The biggest crack mm	Number of cracks %		The biggest crack mm	Number of cracks %		The biggest crack mm
	3mm until	5mm from big		4mm until	7mm from big		6mm until	15mm from big	
Excellent	95	1	7	95	1	9	95	1	20
Good	90	2	8	90	2	11	90	2	25
Satisfactory	80	5	10	80	5	14	80	5	30

The street was measured every 200 m. The results of the measurements taken on the street are presented in Table 2 below, and the normative assessment is presented in Table 3.

Table 2.

No.	Counts taken within 0.5 of the straightedge				
	1	2	3	4	5
1	3/5	5/8	7/5	5/6	6/5
2	9/7	4/5	3/7	9/5	7/9
3	11/6	7/5	6/4	3/5	3/2
4	2/3	5/6	2/3	3/2	4/6
5	7/5	3/4	5/6	2/4	6/5
6	5/3	7/6	6/3	5/4	3 /5
7	4 /1	5/3	3 /3	6 /2	3 /3
8	3 /5	3 /2	2 /6	5/3	5 /5
9	5/3	4 /6	6 /2	2 /3	7/3
10	3 /3	3/4	3 /2	4/3	3 /2
11	4/2	5/3	3 /5	6/3	4 /4
12	5 /3	3 /2	5 /4	3 /3	3 /3
13	3 /2	2 /3	3 /3	4 /2	3 /2
14	3 /5	2 /3	5 /2	3 /3	3/4
15	7 /3	4 /3	2 /2	2 /1	3 /1
16	3 /6	3 /5	3/4	3 /2	2 /3
17	3 /2	3 /2	4 /1	3 /2	3 /3
18	2 /3	3/2	3 /2	4 /3	4 /6
19	3 /2	3 /3	3/6	3 /3	7 /3
20	3 /3	3 /2	3 /3	2/3	4 /2
21	3/3	3 /2	3/4	3 /3	3 /3
22	2/2	3 /2	4 /1	3 /2	3 /3
23	3/3	2/4	6 /2	2 /3	2/3
24	2/2	2 /3	2/3	2/2	3 /2

EduVision: Journal of Innovations in Pedagogy and Educational Advancements
Volume 01, Issue 04, April, 2025
brightmindpublishing.com
ISSN (E): 3061-6972

Note: The values presented in the table indicate the data for the forward direction (i.e., from the XALQA YO‘LI towards the city center), while the denominator values represent the reverse direction.

Table 3

Odometer	Evaluation	Roughness standards using a 3-meter straightedge		
		Number of cracks in %		The largest cracks mm
		Up to 3 mm.	Up to 5 mm.	
0-1 km	Unsatisfactory	36	2.5	9-11
1-2 km	Unsatisfactory	44	36	6-7
2-3 km	Satisfactory	78	12	6-7
3-4 km	Satisfactory	81	14	6-7
4-4.8 km	Good	90	5	6

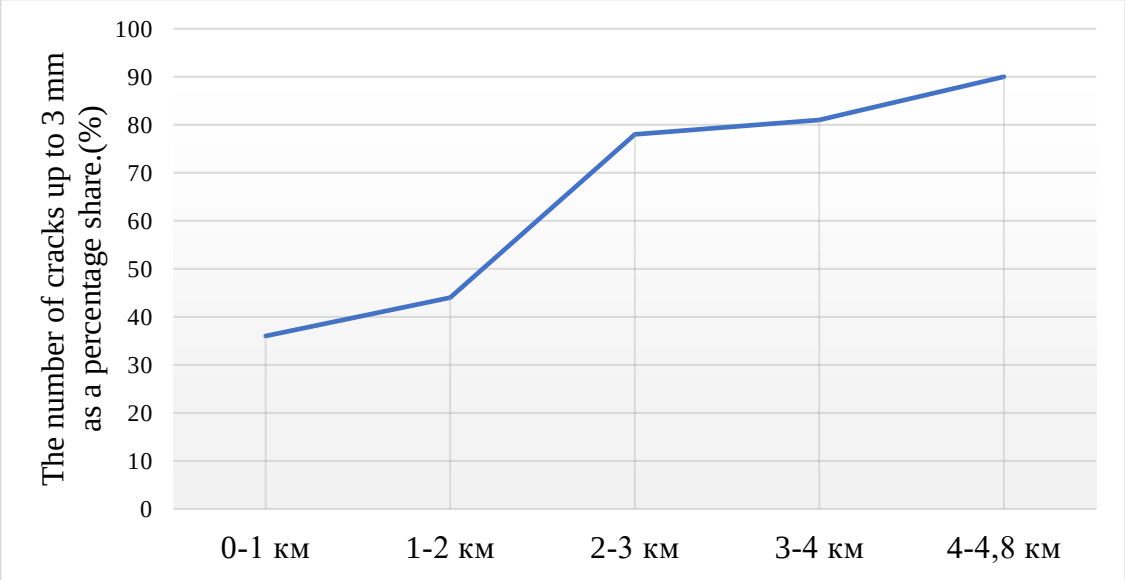

Figure 1. Graph of change in pavement roughness in km .

As you can see from the graph above, on Amir Temur Street in Tashkent (4.8 km from XALQA YO‘LI to the National Bank) According to the results of the measurements carried out using a 3-meter straightedge, the roughness of the existing pavement was found to be unsatisfactory in the range of 0-2 km, satisfactory in the range of 2-4 km, and good in the range of 4-4.8 km. Table 3 was used to assess the roughness of the pavement. The type of pavement on this street is considered capital.

EduVision: Journal of Innovations in Pedagogy and Educational Advancements
Volume 01, Issue 04, April, 2025
brightmindpublishing.com
ISSN (E): 3061-6972

Develop recommendations to ensure safe movement along the street

On the right side of the road along the street:

1) To improve the roughness of the pavement, surface course treatment technology is used on the surface of the pavement between 0-2 km. - 0.37

2) Repair of potholes in the road surface between PK22+00 and PK31+00 - 0.17

On the left side of the road along the street:

1) To improve the roughness of the pavement, surface course treatment technology is used on the surface of the pavement between 0-2 km. - 0.37

2) Repair of potholes in the road surface between PK22+00 and PK31+00 - 0.17

REFERENCES

1. K.X.Azizov. Xarakat xavfsizligini tashkil etish asoslari. -T., «Fan va texnologiya», Toshkent – 2009 y
2. MShN 25-05 «Avtomobil yo‘llarida harakat xavfsizligini ta’minlash bo‘yicha ko‘rsatmalar» Toshkent 2005 y.
3. Исаев, Жахонгир Азамат Угли, Матчон Бекчонович Тўхтаев, and Алишер Туракулович Маматмуминов. "ОПРЕДЕЛЕНИЕ РОВНОСТИ ПОКРЫТИЯ В УЛИЦЕ Ш. РУСТАВЕЛИ В ГОРОДЕ ТАШКЕНТ." Universum: технические науки 3-1 (108) (2023): 68-71.
4. O‘roqov, Asliddin Xushvaqtovich, Qurbon Ochilovich Mo‘Minov, and Jahongir Azamat O‘G‘Li Isayev. "AVTOMOBIL YO’LLARINI TA’MIRLASHDA BITUM IMULSIYASINING O’RNI." Academic research in educational sciences 3.TSTU Conference 1 (2022): 342-345.
5. Исаев, Ж. А., and А. Т. Юлдашев. "ТОШКЕНТ ШАХРИДАГИ Ш. РУСТАВИЛИ КУЧАСИНИ ТРАНСПОРТ-ЭКСПЛУАТАЦИОН КЎРСАТКИЧЛАРИНИ БАҲОЛАШ." ARXITEKTURA, MUHANDISLIK VA ZAMONAVIY TEXNOLOGIYALAR JURNALI 2.1 (2023): 3-5.
6. Исаев Дж., Худайбергенов С. и Тохтаев М. "ИЗУЧЕНИЕ КОЛИЧЕСТВА (СКОРОСТИ) ДВИЖЕНИЯ НА ГОРОДСКИХ УЛИЦАХ (НА ПРИМЕРЕ УЛИЦЫ ШОТА РУСТАВИЛИ)". Наука и инновации 2.A1 (2023): 43-46.
7. Касымходжаев, Б. К., М. Б. Тўхтаев, and Ж. А. Исаев. "АНАЛИЗ СУЩЕСТВУЮЩИХ МЕТОДОВ ОЦЕНКИ РОВНОСТИ ДОРОЖНОГО

EduVision: Journal of Innovations in Pedagogy and Educational Advancements
Volume 01, Issue 04, April, 2025
brightmindpublishing.com
ISSN (E): 3061-6972

ПОКРЫТИЯ АВТОМОБИЛЬНЫХ ДОРОГ." Экономика и социум 6-1 (97) (2022): 625-631.

8. ИСАЕВ, Ж. А., and СК ХУДАЙБЕРГЕНОВ. "ШАҲАР КУЧАЛАРИ ТУТАШМАЛАРИДАГИ ЗИДДИЯТЛИ НУҚТАЛАРНИ ЎРГАНИШ УСУЛЛАРИ (Ш. РУСТАВИЛИ КУЧАСИ МИСОЛИДА)." JOURNAL OF INNOVATIONS IN SCIENTIFIC AND EDUCATIONAL RESEARCH 5.4 (2022): 302-306.
9. Khudaybergenov, S. K., J. A. Isaev, and M. B. Tukhtaev. "ASSESSMENT OF THE ROUGHNESS OF ROAD PAVEMENTS." Экономика и социум 6-1 (97) (2022): 137-140.
10. Хушвактович, Уроков Аслидин и др. «ИЗУЧЕНИЕ ВЛИЯНИЯ ПОГОДНЫХ И КЛИМАТИЧЕСКИХ УСЛОВИЙ НА БЕЗОПАСНОСТЬ ДОРОЖНОГО ДВИЖЕНИЯ В РАЙОНЕ ФЕРГАНСКОЙ ДОЛИНЫ». Наука и инновации 3.C2 (2024): 35-40.
11. Маматкулов, Музаффар, Акбар Нарманов и Аброр Ахроров. «Некоторые вопросы оценки коэффициента сцепления на автомобильных дорогах». Материалы конференции AIP . Том. 2789. № 1. Издательство АИП, 2023.
12. Юнусов, Абдувохид Гофурович. "Йўл қопламаси юзасининг илашиш сифатига таъсир қиладиган тавсифлари тахлили." Молодой ученый 26 (2020): 334-339.
13. Уроков, Аслидин Хушвактович, and Р. Р. Соаталиев. "Возможности измерения и визуализации ровности покрытия автомобильных дорог на основе смартфонов в Узбекистане." Сборник международной научнотехнической конференции “Транспорт: актуальные задачи и инновации. 2021.
14. Muxammadaliyevich, Axrarov Abrorbek. "TRANSPORT VOSITALARIGA AVTOTURARGOHLARNI TASHKIL ETISH BO ‘YICHA XORIJIY TAJRIBA." Scientific Impulse 1.4 (2022): 760-763.
15. Azamat o‘g‘li, Isayev Jahongir, Amanov Atabek Abdumalik o‘g‘li, and Xamroqulov Jasurbek Faxriddin o‘g‘li. "TOSHKENT SHAHRIDAGI MANNON UYG ‘UR KO ‘CHASINING TRANSPORT-EKSPLUATATSION KO ‘RSATKICHLARINI BAHOLASH."

EduVision: Journal of Innovations in Pedagogy and Educational Advancements
Volume 01, Issue 04, April, 2025
brightmindpublishing.com
ISSN (E): 3061-6972

16. Isayev, J., A. Yuldashev, and N. Rajapov. "CARRYING OUT DIAGNOSTIC WORK ON HIGHWAYS AND DRAWING UP A REGISTER OF DEFECTS." Science and innovation 3.A5 (2024): 76-79.
17. Уроков, А., and Р. Соаталиев. "АНАЛИЗ СОВРЕМЕННЫХ И РЕСУРСОСБЕРЕГАЮЩИХ ТЕХНОЛОГИЙ, ИСПОЛЬЗУЕМЫХ ПРИ ОЦЕНКЕ ТРАНСПОРТНО ЭКСПЛУАТАЦИОННЫХ ПОКАЗАТЕЛЕЙ АВТОМОБИЛЬНЫХ ДОРОГ." Научный журнал транспортных средств и дорог 1.3 (2021): 6-11.
18. Уроков, А. Х., and Р. Р. Соаталиев. "Обнаружение дефектов дорожного покрытия с помощью модели машинного обучения." (2021).
19. Исаев, Жахонгир Азамат Угли, Матчон Бекчонович Тўхтаев, and Алишер Туракулович Маматмуминов. "ОПРЕДЕЛЕНИЕ РОВНОСТИ ПОКРЫТИЯ В УЛИЦЕ Ш. РУСТАВЕЛИ В ГОРОДЕ ТАШКЕНТ." Universum: технические науки 3-1 (108) (2023): 68-71.
20. Эргешев, К. Х., Д. В. Ташев, and Ж. А. Исаев. "RESEARCH OF THE INFLUENCE OF TRAFFIC FLOW SPEED ON TRAFFIC SAFETY IN THE AREA OF FERGHANA VALLEY: RESEARCH OF THE INFLUENCE OF TRAFFIC FLOW SPEED ON TRAFFIC SAFETY IN THE AREA OF FERGHANA VALLEY." Ресурсосберегающие технологии на транспорте 2023.2023 (2023): 15-17.
21. Мухаммадалиевич, Ахраров Аброрбек. «Оценка транспортных и эксплуатационных показателей улицы Маннон-Уйгур в Ташкенте». Наука и инновации 3.4 (2024): 390-393.
22. Исаев Дж., Худайбергенов С. и Тохтаев М. «Изучение интенсивности (скорости) движения на городских улицах (на примере улицы Шота Руставели)». Наука и инновации 2.A1 (2023): 43-46.
23. Исаев Дж., Акраров А. и Собиржонов С. «Количество и состав пешеходных и велосипедных потоков в районах Сергели и Янгихаёт города Ташкента». Наука и инновации 3.A5 (2024): 267-270.