

## PHRASAL VERBS WITH "HEART" IN GERMAN AND OTHER FOREIGN LANGUAGES

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### ANNOTATION:

**This article is about which is considered the flower of Hazrat Navoi's scientific thinking, has an unparalleled status in the history of Uzbek science. This work is the first pure linguistic research in the Uzbek language. It should be noted that before Nizamiddin Mir Alisher Navoi, dozens of scientific works on the study of Turkic languages were created. This work is the first pure linguistic research in the Uzbek language. It should be noted that dozens of scientific works on the study of comparing different languages were created and it is continued nowadays.**

**Keywords and expressions: an unparalleled status, lexicography, pure linguistic research, emphasize, genre and style.**

### INTRODUCTION:

The great thinker and poet Alisher Navoi is a man who struggles with three languages (Persian, Arabic, Turkish).

At the time, he wrote his works using the rich treasures of the Uzbek language. He wrote in this language such literary works as "Khazoinul-maoniy", "Khamsa", "Lisonut-tayr", literary works such as "Majolisun-nafois", "Mezonul-avzon", linguistic works such as "Muhokamatul-lugatayn". In this way, he proved in practice, both theoretically and practically, that the Uzbek language has a rich potential for the creation of artistic and scientific works.

Alisher Navoi summarized his seminal work in the field of lexicography and grammar

in the work "Muhokamatul-lug'atayn". In this play, Navoi compared the old Uzbek language with the Persian-Tajik language and began the method of comparative study of incompatible languages. [1,3]

A great scholar's comparative study of languages, as well as general linguistics in the play promotes ideas as well. In the play, language and thinking advance ideas about the origin of languages.

### THEORY AND RESEARCH:

Linguists are a major tool in the study and comparison of the history of language. In all of the scientific literature, the science of comparative linguistics entered the early nineteenth century F.Bopp, R.Rusk, Kz.Grimm as the founders of this science and A.H. Vostokov. However, Oriental linguistics was not taken into account here, as the comparative method was introduced to science in the 19th century, but was first used by Mahmud Kashgari, a scholar living in the 11th century, to describe related Turkic languages.

One of the Turkologists N.A. Baskakov said about him: "Turkic languages by comparative-historical method Mahmoud Kashgari was the first pioneer in the study. " Because Mahmud Kashgari in his work "Devonu lug'otit turk" compares the Turkic languages belonging to the same family using the method of inter-sheva-historical comparison.

In Europe, the first work on the interaction of related languages was published in 1538 in French created by the humanist Gvilelmgma Postellusa. This work is called The

Relationship of Languages, and the play seeks to classify related languages.

For the history of Turkology, advanced in Navoi's work "Muhokamatul-lugatayn" Valuable ideas are:

1. Comparing Uzbek with Persian-Tajik, showing that it is not inferior to Persian encouraged writers to write works in Uzbek.

The great thinker Alisher Navoi five centuries ago, with his monograph Muhokamat-ul-lug'atayn (Discussion of Two Languages), based on the comparative study of languages, laid the foundation for a completely new scientific direction in world linguistics - comparative studies. Through this work, scholar has developed research methods, methods of analysis and methodological framework of comparative linguistics. The role, analysis and research methods of this scientific source are still very important in modern linguistics.

The world with the publication of Alisher Navoi's "Muhokamatul-lugatayn" opened a new page in linguistics. Linguistics today has laid the foundation for a new direction called comparative (constructive) linguistics. Their specific features are revealed.

2. The play also contains ideas on the historical phonetics of the Uzbek language. Navoi sounds pays great attention to the articulatory-functional side and determines the sound type-phoneme according to the sign. Draws attention to the phoneme and letter relationship. They state that they do not always correspond to each other, that one letter can represent several phonemes. M: The word "bow" means 4 phonemes, and the letter "wow" means four phonemes. Navoi writes about it: "And the word blue is also used in many senses. They also say green, green and dead spots.

3. When comparing Navoi 2 languages, Uzbek language showed the superiority of vocabulary. Navoi comparing words in Turkish and Persian,

the Turkish term for some words indicates that there is no stress in Persian to express this concept.

They do not know Arabic and say em and hol. And they say they know Turkish. And the father and the mother-in-law speak this language. In order to demonstrate that the vocabulary of the Turkic language is not less than the vocabulary of the Persian language, Alisher Navoi cites and analyzes 100 verbs in the play and considers the Uzbek language as a treasure. Navoi states that there are no lexical-semantic parallels of 100 verbs in Persian, and illustrates with a concrete example how they give the writer the opportunity to express the subtle aspects of human experiences.

4. Comparing the two languages, Navoi noted the advantages of the Uzbek language in word formation shows. Muhokamatul-lugatayn provides valuable insights into the history of word formation in the Uzbek language. In particular, the suffix -chi, -vul, the verb -sh, -t, -I his views on supplements are noteworthy.

5. Alisher Navoi in the process of comparing Uzbek and Persian-Tajik languages in the play also describes the peculiarities of the historical stylistics of the language. Taking advantage of the rich potential of the Uzbek language, he emphasizes in which genre and style he wrote his works.

This work by Alisher Navoi compares the Uzbek and Persian-Tajik languages, the dictionary structure of the Uzbek language has a special significance as the first philological work dedicated to many of the issues raised in it are still relevant.

In the history of linguistics, comparative studies based on a new scientific direction, initiated by Alisher Navoi, began to appear in Europe only in the first half of the XIX century, and in the history of linguistics, it became known as comparative-historical linguistics. Today it is one of the major branches of modern linguistics. [1,3]

This research, which is considered the flower of Hazrat Navoi's scientific thinking, has an unparalleled status in the history of Uzbek science. This work is the first pure linguistic research in the Uzbek language. It should be noted that before Nizamiddin Mir Alisher Navoi, dozens of scientific works on the study of Turkic languages were created. However, they were written in Arabic, and most of them were textbooks.

With his work *Muhokamatu-l-lug'atayn* (Discussion of Two Languages), Navoi developed a method of creating a scientific work on linguistics in the Uzbek language, as well as a technique of written scientific narration, as well as its scientific terminology. In this sense, this work is a very valuable fundamental research for Uzbek and world science.

Recently, a new edition of this work was published under the analysis, translation and interpretation of one of the scholars of the history of Turkic languages. The book contains a study of the work, a scientific transcription of *Muhokamatu-l-lug'atayn*, a simplified translation into modern Uzbek, and a glossary of scientific terms used in the work. The appendix also includes a facsimile of the Paris and Topkapi copies.

Four manuscripts of *Muhokamatu-l-lug'atayn* have survived, the first of which is in the Navoi College, housed in the Revan Library of the Topkapi Palace Museum in Istanbul. It is believed to be the oldest of the available copies. Among the manuscripts of *Muhokamatu-l-lug'atayn*, the Topkapi and Paris copies are very close in text: the same is true of the Paris manuscript as it is in the Topkapi.

To this end, Navoi cites a hundred verbs that have no alternative in Persian, showing the richness of the Uzbek language. In the Tashkent edition of the work, these verbs are ninety-nine. The number of verbs in Topkapi and Paris is ninety-nine, and in Fatih and Budapest it is

one hundred. These two copies also contain the 100th verb found in another manuscript. It is the verb "to pinch" and is followed by the word "itch". The secretary who was copying the work accidentally dropped the word. Turkologist K. Sodiqov concludes that the reason for the absence of this verb in the Tashkent edition is that the basis for the publication was the Paris manuscript.

In the language of Navoi's works, we can see that synharmonism (harmony of sounds) was applied as an "iron law". It also allows us to understand the sound system. For example, in the examples given by the author, the -maq variant of the masdar index is added to the "thick" root words: "dry", "deceive", "squeeze", "lick"; For words with a "thin" pronunciation, the -mäk variant is added: "igirmak", "indamak", "surkanmak", "ortanmak". This means that in the Navoi language, the back row, the front row with "thick" a, and both "thin" ä are used as independent phonemes.

Interestingly, the new edition of the work provides a detailed analysis of such textual differences between the manuscripts. According to the Turkologist, during Navoi's lifetime there were two versions of *Muhokamatu-l-lug'atayn*. In other words, Navoi will re-edit the version copied by the secretary with corrections and additions. Thus, two versions of this work were widely available to the students of that time. [2,6]

'When sorrows come, they come not single spies, but in battalions.' So said Claudius in Shakespeare's Hamlet. As a general rule, grief and sadness are more interesting to writers and poets than happiness, and there are many fine descriptions in literature. However, in this post, I want to focus on language that we use in everyday speech.

#### **PROCESS:**

Firstly, it is obviously very important to use phrases that are suitable for the level of

trauma involved. You might describe someone as down in the dumps or down in the mouth if, for instance, they did badly in a job interview or failed an exam. Similarly, the phrase out of sorts is used mainly for someone who is usually cheerful, but simply seems a bit glum at the moment. However, if the sadness is caused by something serious like a bereavement (= when someone dies), those phrases would sound too trivial.

For that kind of situation, we could say that they are broken-hearted or completely grief-stricken. In British English, we talk about people being knocked sideways or knocked for six in order to emphasize their shock and pain. If someone is extremely upset about something, we can say they have taken it hard. An informal but emphatic phrase, which seems to have become much more common recently, is to say that someone is in bits. Strangely enough, it doesn't have any negative connotation, whereas if you say that someone has gone/fallen to pieces or fallen apart, it can sound slightly judgmental, as if they are failing to cope with what has happened.

A continuing bad situation can get you down or cast a shadow over everything, while if you feel as if you are carrying sadness inside you, you might describe yourself as having a heavy heart. We often talk about doing something with a heavy heart when we are forced into an action that makes us sad. If something makes you feel as though you want to cry, we say that it brings a lump to your throat, and if you well up, tears come into your eyes, and you might even burst into tears.

However, as sad as life can be, we don't like people who mope around (= act in a miserable way) or wallow in their sadness (= make no effort to recover, as if they are enjoying it). If we are brave (or rude) enough, we might ask them to pull themselves together (= act in a more sensible way).

Lastly, in case this post has left you feeling dejected, forlorn, glum, miserable or wretched – look out for my next post which will be all about happiness!

A hollow muscular organ that pumps the blood through the circulatory system by rhythmic contraction and dilation. In vertebrates there may be up to four chambers (as in humans), with two atria and two ventricles.

'It rises to a peak, called the systolic pressure, at the height of the contraction of each heartbeat as the heart pumps blood out.'

1. The region of the chest above the heart. ('Holding hand on heart for the Pledge of Allegiance') [2,6]

For example: 'Men remove their baseball caps, clamping hands on hearts and swelling their chests with pride.'

'His knife was gleaming just above her heart, his hands poised to make the fatal move.'

'Relatives greet each other with a gentle hug and a kiss on the left shoulder above the heart.'

'I gripped the handle of the dagger in both hands, and positioned it in the air above my heart.'

'O'Meara wears the bullet around his neck, letting it dangle above his heart.'

'It was a thin pearl-colored gown that went down to my ankles and cut off somewhere above my heart.'

2. The heart regarded as the centre of a person's thoughts and emotions, especially love, compassion, or loyalty. ('Hardening his heart, he ignored her entreaties')

For example: Well-produced digital media gives us the chance to love God with our hearts and souls as well as our minds.'

'You love to pour your heart and your art into making gifts with a personal punch.'

'Our minds are to be as fully yielded to God and as actively engaged in loving Him as our hearts and souls are.'

'We are real people with hearts that love, minds that think and souls that are as pure as any man's!'

'We depend on donations from loving hearts and caring hearts.'

'The passion in this film would swell the heart and emotions of the least romantic.'

'And I believe we must match our compassionate hearts to our preservative minds.'

'Perhaps it's just something in the Autumn air, egging us on to do what our hearts love, what our minds desire.'

'There's a lot of love in my heart for several of your local booty-shakers.'

'Have a compassionate heart that creates a little space for those who need a bit of understanding or forgiveness.'

3. Mass noun One's mood or feeling. ('They had a change of heart')

4. Mass noun Courage or enthusiasm.

'they may lose heart as the work mounts up'

5. The central or innermost part of something. ('Right in the heart of the city')

For example: 'It is a central location in the heart of Saskatoon and it should be pretty easy to get to.'

'The national capital is Mexico City, situated in the heart of central Mexico.'

'In the heart of the vast central square of the place she caught sight of a recognizable object.'

'The Vaal rises in the central heart of South Africa and debouches many hundreds of miles later into the Atlantic Ocean.'

'In the heart of the central medallion is an eight-petalled flower symbolizing the centre of the universe.'

'Deep in the heart of Central India there is a wild forest surrounded by sheer 1,200 feet high cliffs.'

'Modern viticulture Uzbekistan is in the very heart of central Asia, on the same latitude as Italy.'

'The historic heart of the city is centrally situated on the northwest axis, and towards the eastern border.'

'The Pavilion will be built in Victoria Square in the heart of the city.'

6. A card of the suit of hearts.

'Players must follow suit if possible, and a player with no cards of the suit led must play a heart.'

7. Phrases: \*after one's own heart. (Sharing one's tastes or views.)

'he looked like a man after my own heart'

\*at heart (In one's real nature, in contrast to how one may appear.)

'he's a good lad at heart'

\*break someone's heart (Overwhelm someone with sadness.)

'it would break her heart to have to leave'

\*by heart (From memory.)

'Poems and plays only come fully to life when they are spoken, from the heart, by heart.' [2,4] close to one's heart (Of deep interest and concern to one.)

\*from the heart (With sincere feeling.)

'their warmth and hospitality is right from the heart'

\*have a heart (often in imperative Be merciful; show pity.)

'They've given over a million dollars through our services to the evacuees there and so they have a heart.'

\*have a heart of gold (Have a generous nature.) For example: 'Micheál was described by his family this week as having a heart of gold, a boy who displayed a kindness and consideration for others that touched the lives of all those who met him.'

8. What are the "cockles of your heart" and why do they need warming?

One of the meanings of "cockle" is the chamber of a kiln: in reference to the heart, it refers to the chambers, of which there are four (two atria and two ventricles). The heart has always been associated with emotions, especially love,

excitement and fear, probably because when we feel a strong emotion we feel our heart thumping and beating faster. So when something "warms the cockles of our heart", it is a reference to something pleasant that makes our heart beat faster and makes us feel good. It is probably also the origin of the saying that something gives us that "warm and fuzzy feeling".

The cockles of the heart are its ventricles, named by some in Latin as "cochleae cordis", from "cochlea" (snail), alluding to their shape. The saying means to warm and gratify one's deepest feelings.

What are the "cockles of your heart" and why do they need warming?

#### GOALS AND OBJECTIVES:

In the Dutch language, the word for fireplace or heater is "kachel" and the word for home or hearth is "haard". There is an old Dutch saying "eigen haard is goud waard", meaning your own home is worth gold. Of that, make what you will.

The origin of this phrase could be "cochleae cordis", a Latin medical term referring to the ventricles of the heart, or cockles, a type of mollusc, which can be heart-shaped (zoological genus was once Cardium).

I seem to remember being told that 'cockles' referred to the 'ear-like' appendages on the human heart called auricles (Latin for 'ears'). There are left and right auricles (now referred to as atrial appendages) which are continuous with the left atrium and right atrium (the upper chambers of the heart) respectively. They are believed to be remnants of the left and right atrium of the developing heart when we were embryos.

Therefore, if you warmed these 'auricles' you would be warming the cockles of your heart. [5,7]

Here are some examples in three languages (Dutch, Russian, and Uzbek):

- 1) Jmdm.ans Herz gewachsen sein jmdm.so lieb sein, daB er nicht entbehren möchte-прійтись по сердцу(или по душе) кому = либо; очень полюбиться-
- 2) юрагидан уриб колмоқ.
- 3) Das Herz blutet mir es tut mir sehr leid-у меня сердце кровью обливается (разрывается)-Юрагим эзилади,юрагим (ичим) ачишади.
- 4) 3. Jmdm.etwas ans Herz legen-jmdm. bitten,sich um etwas (jmdn.) zu kümmern-настойчиво рекомендовать,советовать,кому-л.,что-л-кимнидир қаттий туриб далолат қилмоқ,кимгадир матонат билан маслахат бермоқ.
- 5) Jmdn.auf Herz und Nieren prüfen(fam)(auch eine Prüfung auf Herz und Nieren)
- 6) jmdn.gründlich prüfenҲподвергать строгой проверке,разбирать по косточкам кого-л.-авра-астарини агдармоқ.
- 7) Jmdn.ins Herz schleBen jmdn sehr gern haben-привязаться сердцем к кому-л,чему-л-ошиқу беқарор бўлмоқ, кўнгил қўймоқ, жон дил билан севмоқ, юрагидан урмоқ.
- 8) 6. Ein Herz und Seele sein unzertrennlich sein,in den Meinungen immer übereinstimmen- жить душа в душу-бир тану бир жон бўлиб яшамоқ.
- 9) 7. Das Herz auf dem rechten Fleck haben verständnisvoll sein,hilfsbereit sein-разг.кто-л.настоящий человек(добрый,честный,храбрый)- хакикий,(чин) инсон;багри кенг;ёрдамини аямайди.
- 10)8. Das Herz auf der Zunge tragen(haben) seine Gefühle allzu offen aussprechen -кого-л,что-л, на языке,то и на уме-тили билан дили бир.
- 11)9. Seinem Herzen einen StoB geben sich endlich zu etwas entschlieBen;sich

- überwunden,für jmdn,etwas zu tun-отважиться на какое-л .решение. дать (наконец) свое согласие-юраги дов бермоқ, журьат қилмоқ.
- 12)10. Etwas auf dem Herzen haben (umg) ein Anliegen haben,einen Wunsch haben,den zu äußern einem schwerfällt-не решаться высказать что-л,(просьбу,желание),мяться-журьат қилолмаслик,тортинмоқ,иккиланмоқ.
- 13)11. Seinem Herzen Luft machen aussprechen,was einen bewegt;sagen was einen ärgert-высказать или выложить всё что накопело-юрагидаги (аламини,ғамини,дардини)борини тўкиб солмоқ.
- 14)12. Sich etwas zu Herzen nehmen etwas (z.B.Kritik,einen Rat) beachten und danach handeln-принимать близко к сердцу что-л-ўзига олмоқ, жуда катта эътибор бермоқ.
- 15)13. Jmdm.aus dem Herzen sprechen ganz im Sinne von jmdm.sprechen-что-л.полностью соответствует чьим-л.мыслям (чувствам)-гапи гапига мос келмоқ.
- 16)14. Nicht an Herzdrücken sterben alles auch Unangenehmes offen aussprechen-не побояться высказать откровенно-очик гапирмоқ,ошкора сўзламоқ.
- 17)15. Hand aufs Herz legen-по правде говоря-тўғриси айтганда.
- 18)16. Die Worte brannten in seinem Herzen-эти слова жгли ему сердце- бу сўзлар унинг юрагига ўт кўйди.
- 19)17. Es ist ein Mensch so recht nach meinem Herzen-этот человек мне по вкусу, этот человек мне по душе-бу одам мени дидимдагидек, қалбимдагидек.
- 20)18. Ein Kind unter dem Herzen tragen-быть беременной, носить дитя под сердцем, носить под сердцем дитя-Юраги остида болани сакламоқ, Хомиладор булмоқ.

- 21)19. Herz blutet ihm-у него сердце кровью обливается-Унинг юраги кон булди, унинг юраги конга тўлди.
- 22)20. Es wurde ihm weit ums Herz -его душа переполнилась счастьем-Унинг қалби бахт билан лимо лим тўлди.

#### CONCLUSION:

Alisher Navoi was the first in the world in 1499 with his work "Muhokamatul-lugatayn" compares non-related languages, i.e. languages belonging to different language families. He compares the Old Turkic language, which belongs to the Turkic language family, with the Persian language, which belongs to the Indo-European language family.[5,7]

In the European world, the Dutch scientist Lucif Justus Scaliger created such a work in 1599, 100 years after Navoi's work. The work "Reflections on the European Language. Attempts have been made to classify all the languages of Europe, which are divided into 11 main groups - language families, ie 4 large and 7 small groups. This research, which is considered to be the flower of great scholars' scientific thinking, has an unparalleled status in the history of Uzbek science. This work is the first pure linguistic research in the Uzbek language. It should be noted that dozens of scientific works on the study of comparing different languages were created and it is continued nowadays.

#### REFERENCES AND INTERNET SITES:

- 1) Deutsch-Russisch-Uzbekisches Phraseologisches Wörterbuch. Немисча-Русча-Узбекча Фразеологик Лугат, М.И.Умархужаев, К.Н.Назаров Tashkent: "Akademnashr", 2017, 60-63.
- 2) Kasimjon Sodiqov (Alisher Navoi. Muhokamatu-l-lug'atayn .. - Tashkent: "Akademnashr", 2017, 102-105)

- 3) Aulls Mark. "O'qish va tushunish bilan bog'liq" Malakani yozib olish. "Tillarning san'ati 52 (1998): 808-812.
- 4) Cairns, Xelen va Charlz Cairns. Psixolinguistlar: A.Tilning kognitiv ko'rinishi. Nyu-York: Xolt, Raynxart va Winston, (1976) : 78-85.
- 5) Karlsen, G. Robert. "Adabiyotshunoslik". Ingliz tili jurnali 63(1994): 23-27.
- 6) Yusufjonova, S. (2021). CERTAIN LINGUISTIC PECULARITIES OF PHRASEOLOGICAL UNITS. Scientific Bulletin of Namangan State University, 2(2), 289-293.
- 7) Anarjanovna, N. M. (2021). Technology of formation of integrated reading competence in English. ACADEMICIA: An International Multidisciplinary Research Journal, 11(3), 666-672.
- 8) Nazaraliyeva, M. A., & Saydaliyeva, M. U. (2020). Developing reading skill in using integrated skills. Вестник педагогики: наука и практика, (51), 133-134.
- 9) Nazaraliyeva, M. A. (2020). BASE OF INTEGRATED SKILLS IN PSYCHOLOGICAL PRINCIPLES OF TEACHING ENGLISH. Scientific Bulletin of Namangan State University, 2(11), 213-218.
- 10) Allaberdieva, G. B. (2020). DEVELOPING STUDENTS VOCABULARY LEARNING STRATEGIES. Scientific Bulletin of Namangan State University, 2(11), 199-203.
- 11) Nazaraliyeva, M. A. (2021). Integration of Reading and Writing in Teaching English. CENTRAL ASIAN JOURNAL OF THEORETICAL & APPLIED SCIENCES, 2(12), 147-151.
- 12) NAZARALIEVA, M. (2018). The main effective strategies in teaching reading. Scientific journal of the Fergana State University, 1(5), 136-139.
- 13) Mukhtorovna, Y. S. (2021). Regularly used phrasal verbs German language. ACADEMICIA: An International Multidisciplinary Research Journal, 11(3), 673-680.
- 14) ABDULKHAEV, Z. E. (2021). Protection of Fergana City from Groundwater. Euro Afro Studies International Journal, 6, 70-81.
- 15) Erkinjonovich, A. Z., & Mamadaliyevich, M. M. (2021, May). WATER CONSUMPTION CONTROL CALCULATION IN HYDRAULIC RAM DEVICE. In E-Conference Globe (pp. 119-122).
- 16) Мадрахимов, М. М., & Абдулхаев, З. Э. (2019). Насос агрегатини ишга туширишда босимли сув узатгичлардаги ўтиш жараёнларини ҳисоблаш усуллари. Фарғона Политехника Институтини Илмий-Техника Журнали, 23(3), 56-60.
- 17) АБДУЛХАЕВ, З., & МАДРАХИМОВ, М. (2020). Гидротурбиналар ва Насосларда Кавитация Ҳодисаси, Оқибатлари ва Уларни Бартараф Этиш Усуллари. Ўзбекгидроэнергетика" илмий-техник журнали, 4(8), 19-20.
- 18) Mamadalievich, M. M., & Erkinjonovich, A. Z. Principles of Operation and Account of Hydraulic Taran. JournalNX, 1-4.
- 19) Madraximov, M. M., Abdulkhaev, Z. E., & Orzimatov, J. T. (2021). GIDRAVLİK TARAN QURILMASINING GIDRAVLİK HISOBİ. Scientific progress, 2(7), 377-383.
- 20) Arifjanov, A., Otaxonov, M., & Abdulkhaev, Z. (2021). Model of groundwater level control using horizontal drainage. Irrigation and Melioration, 2021(4), 21-26.
- 21) Мадрахимов, М. М., Абдулхаев, З. Э., & Ташпулатов, Н. Э. (2019). Фарғона Шаҳар Ер Ости Сизот Сувлари Сатҳини Пасайтириш. Фарғона Политехника Институтини Илмий-Техника Журнали, 23(1), 54-58.
- 22) Usarov, M., Mamatisaev, G., Yarashov, J., & Toshmatov, E. (2019, December). Non-



- stationary oscillations of a box-like structure of a building. In Journal of Physics: Conference Series (Vol. 1425, No. 1, p. 012003). IOP Publishing.
- 23) Usarov, M., Mamatisaev, G., Ayubov, G., Usarov, D., & Khodzhaev, D. (2020, July). Dynamic calculation of boxed design of buildings. In IOP Conference Series: Materials Science and Engineering (Vol. 883, No. 1, p. 012186). IOP Publishing.
- 24) Xamdaliyevich, S. A., & Rahmankulov, S. A. (2021, July). INVESTIGATION OF HEAT TRANSFER PROCESSES OF SOLAR WATER, AIR CONTACT COLLECTOR. In E-Conference Globe (pp. 161-165).
- 25) Abdulkhaev, Z. E., Abdurazaqov, A. M., & Sattorov, A. M. (2021). Calculation of the Transition Processes in the Pressurized Water Pipes at the Start of the Pump Unit. JournalNX, 7(05), 285-291.
- 26) Мадхадимов, М. М., Абдулхаев, З. Э., & Сатторов, А. Х. (2018). Регулирования работы центробежных насосов с изменением частота вращения. Актуальные научные исследования в современном мире, (12-1), 83-88.