

PREPARATION OF PILE AND DETERMINATION OF TECHNOLOGICAL INDICATORS

Shirinova Nilufar Israilovna

Bukhara Institute of Engineering and Technology is a researcher

ABSTRACT

In this article, the function of the piling machine is to thin the pith to the required linear density, to cook the product and to wind it into a reel. The braid is thinned in a stretching device, the ends of the fibers that make up it are straightened, flattened and parallelized, and it is stated that a finer braid is formed from it.

Keywords: Pilik, thick, piltla and pilik, detail, thread, reel.

ПОДГОТОВКА СВАИ И ОПРЕДЕЛЕНИЕ ТЕХНОЛОГИЧЕСКИХ ПОКАЗАТЕЛЕЙ

Ширинова Нилуфар Исраиловна

Бухарский инженерно-технологический институт – научный сотрудник

АННОТАЦИЯ

В данной статье функция укладочной машины заключается в утончении сердцевины до необходимой линейной плотности, варке продукта и намотке его в рулон. Косу утончают в натяжном устройстве, концы входящих в нее волокон распрямляют, уплотняют и распараллеливают и утверждают, что из нее образуется более тонкая коса.

Ключевые слова: Пилик, толстый, пильта и пилик, деталь, нить, катушка.

PILIKNI TAYYORLASHNING TEXNOLOGIK KO'RSATKICHLARINI ANIQLASH

Shirinova Nilufar Isroilovna

Buxoro muhandislik-texnologiya instituti tadqiqotchisi

ANNOTATSIYA

Mazkur maqolada piliklash mashinasining vazifasi piltani kerakli chizikiy zichlikkacha ingichkalashtirish, mahsulotni pishitish va g'altakka o'rashdan iborat. Piltla cho'zish asbobida ingichkalashtiriladi, uni tashkil etuvchi tolalarning uchlari to'g'irlanadi, tekislanib paralellashtiriladi va undan nozikrok pilik hosil qilinishi bayon qilingan.

Kalit so'zlar: Pilik, yo'g'on, piltla va pilik, detall, ip, g'altak.

The task of the braiding machine is to thin the braid to the required linear density, cook the product and wind it on a reel. The braid is thinned in a stretching device, the ends of the fibers that make up it are straightened, flattened and parallelized, and a finer braid is formed from it. The piltache is cooked by giving twists with the help of a cooking mechanism - the pilaf is formed. In order to facilitate the use of the pile to the next stage, the tool of the winding mechanism was wound on a spool, and it was possible to prepare threads of low linear density in two-pass pile machines.

Piling machines are divided into the following types depending on the linear density of the pile being prepared:

1. Machines for making thick pilik.
2. Machines for making pilik of medium thickness.
3. Machines for making thin pilik.

In addition, the components of the rolling machines differ in the structure of the supply zone, the stretching device and the cooking-wrapping mechanism. In today's filing machines, the full package is separated and the empty spools are placed using automatic mechanisms.

The operation of hair dryers is almost the same. They differ from each other in such parameters as the estimation device, the structure of the stretching device, the amount of stretching, the size of the rings, the number and distance between them, and the mass of the package.

When the braid inserted in the stretching device is stretched to the required amount, the ends of the fibers that make up it are straightened, flattened and parallelized, and a thin braid is formed from it. The pilica is formed by twisting the pilica around the edge using the pilica cooking mechanism. In order to make the raw product easy to use at the next stage, it is rolled into a package by means of a winding mechanism. The technological process in the machine is controlled by a computer program. There are devices that control the coil and coil disconnection, which serve to automatically stop the machine.

1st supply device; 2-stretching tool; 3-turn distributor; 4th ragulka; 5-spool carriage; 6-reel installation device; 7th reel drive; 8-reel carriage drive.

Support equipment and stretching tools. Security device

In the braiding machine, the braided strands are wrapped on a reel by means of a winding mechanism so that they are ready for the back of the machine. The diameter of the plates occupies a relatively large area (they are placed in 4 rows).

Supply devices must meet the following requirements:

1. The height of the device should take into account the height of the service provider.
2. It should be possible to change the height of the device.

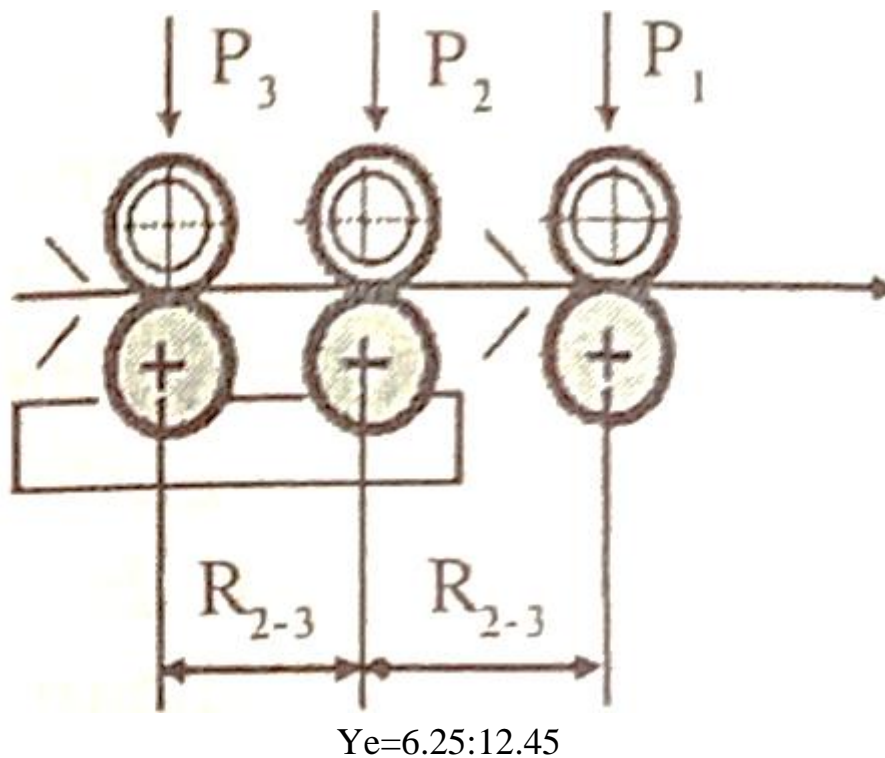
3. It should be convenient and easy to place the plates.
4. Transmitted batteries should not touch each other.

In the supply devices, one or more guide shafts and coil separators of different designs are used. In order to prevent hidden stretching in the high-frame supply devices, the transmission guide shafts are increased, and the spring disks are used in the bases where the coil is located.

The first group of 1-piled bald eagles; The second group of 2-piled bald eagles; 3-pillar of the supply structure; 4-six-thread steering shaft; 5-pin splitters; 6-photo relay (floating switch disconnection) 7-bracket.

The structure of stretching devices, the number of stretching pairs, stretching zones, the amount of private and general stretching, the loading of pressing rollers, the diameter of cylinders and rollers, and the distribution of stretching pairs are different. In addition, it can also differ with the operation of devices that remove and remove the lint that is separated during the stretching process.

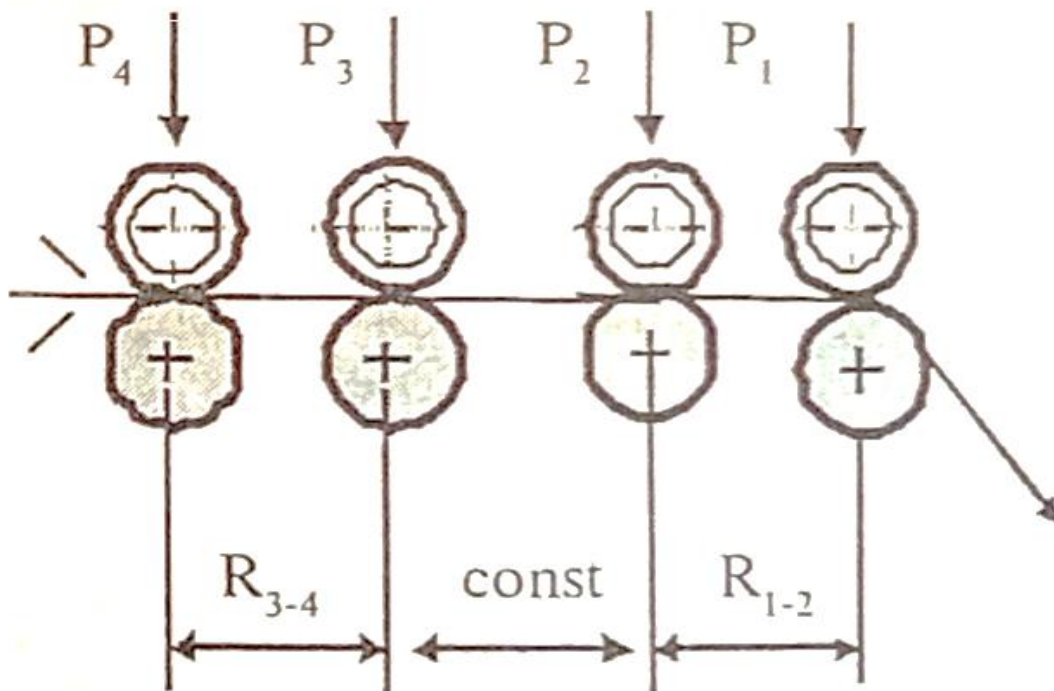
Until recently, hair removal machines were equipped with the following stretching devices:



R1-2=35:50mm

R2-3=28:45mm

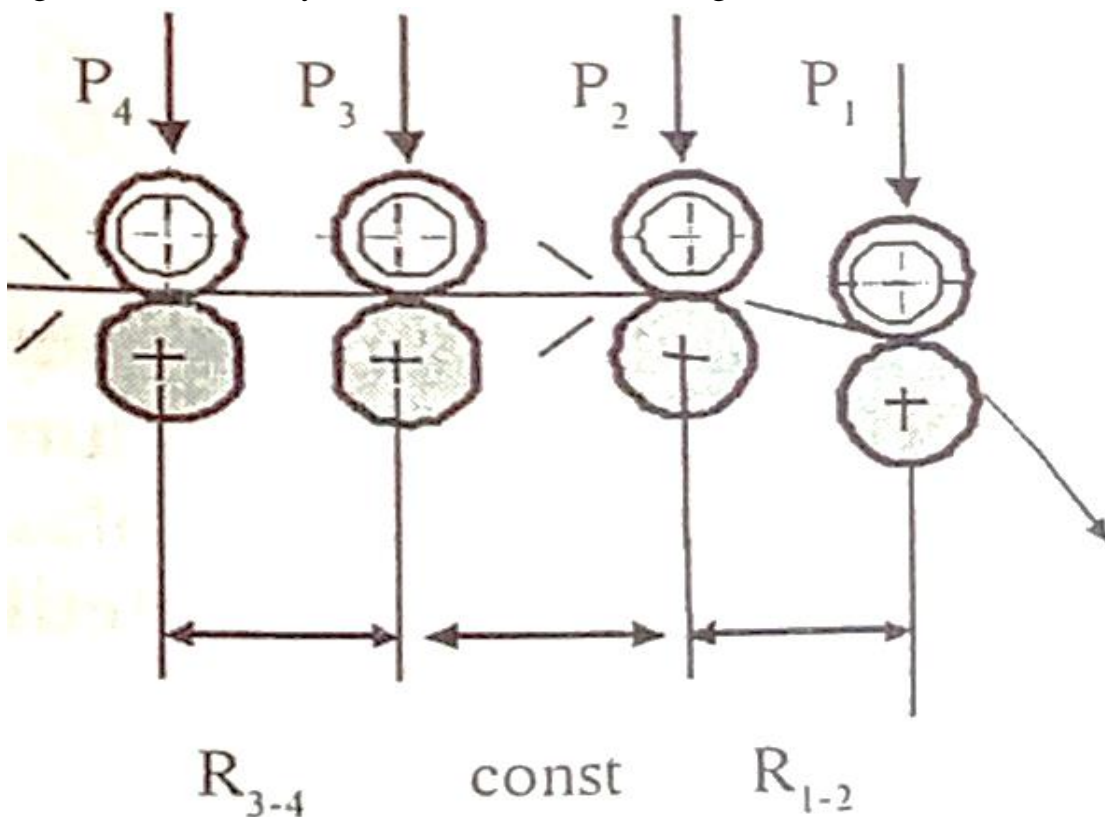
Fig. 2.1.4. Stretching tool with three-cylinder compactor (R-260-3)



$E=8:18$ $R_{3-4}=37:50$ mm $P_1=78:83$ H

$R_{1-2}=38:55$ mm $P_{2,3,4}=59:69$ H

Figure 2.1.5. Four-cylinder three-zone stretching tool. (PT-132-3)



2.1.6. Fig. Four-cylinder three-zone stretching tool.

The main drawback of these stretching devices is the low accuracy of their details, the insufficient quality of the materials used, the high noise level in the movement

transmission, and the durability of elastic coatings. 3x3 and 4x4 system stretching devices used in pleating machines have almost eliminated the above defects.

This stretching device consists of two compactors, 2 belts, 4 cylinders and 4 rollers, stretching is carried out in three zones. The rollers are moved to a certain distance from the center of the cylinder (up to 2, 4, 5, 6 mm). The sliding distance is 3 mm in universal case, 2 mm for cotton fiber, 4 mm for synthetic fibers is recommended.

3x3 and 4x4 stretchers are produced by several companies in almost the same construction. In them, the stretching and cooking lines are set at the same slope.

Thickeners: The driving mechanism of the piling machines provides forward-reciprocating movement to the supplied product, which serves to evenly wear the elastic coatings of the rollers and extends their service life.

As a result of the use of specially designed compactors in piling machines, there is no need for a driving mechanism. The spreading movement of the product passing through the compactors led to the extension of the service life of elastic coatings.

The compactors used in piling machines can be open or closed. When the product passes through the hole of the compactor, the fibers in it become denser and come closer to each other, the contact between them increases, the force of friction increases, and their elasticity increases. As a result, the stretching process is improved in every way, that is, the degree of alignment and parallelization of fibers increases.

Cooking process: The cooking process of the product is one of the important activities in yarn production. The cooking process is used in rolling, spinning and cooking machines.

The purpose of the cooking process is to create a rounded product with the desired hardness from relatively short fibers.

The essence of the cooking process is to twist parallel fibers around the axis of the product, arrange them along a helical line, and increase their resistance to shearing forces (toughness).

When the product is cooked, as a result of the densification of the fibers, their pressure on each other increases, and the force of mutual friction appears. It is this force that ensures the product's resistance to shearing forces.

The twisting of the product causes the fibers to be arranged along helical lines and to a certain amount of reduction in length. This phenomenon is called induction in cooking.

Cooking level: To form the braid, twists are given to the braid coming out of the stretching device with the help of a baking mechanism. As a result, the product is relatively dense and rounded.

One turn of the needle or ragulka around the axis of the needle is given one turn. The number of turns per one meter of product is called cooked.

There is right and left cooking and they are defined as follows.

Z is right-handed and is oriented clockwise.

S-left is baked, and it goes counter-clockwise.

d-product diameter, mm

h-height of one turn, mm

P-baking angle.

Doneness can be determined as follows

$K=n/v1$ (turns, meter) (2.1.1)

K-cooked, twist, meter

number of rotations of nu-urchuk or ragulka, min.

Speed of V1-front cylinder, m/min.

From the drawing above

$K=1000/h$ (twists/meter) (2.1.2)

The ripening coefficient represents the physical essence of ripening and is determined by calculating the angle of twists (ripening). Using the coefficient of ripeness, it is possible to determine the ripeness of a product of different linear density.

The cooking coefficient is selected based on the length of the fiber, the linear density, the linear density of the product and the composition of the sorting.

If the length of the fiber increases, the cooking coefficient decreases accordingly. As the linear density of fiber and the fiber made from it increases, the coefficient of cooking also increases.

The lower the selection, the greater the coefficient of ripeness.

Along with the practical ripening coefficient, the critical ripening coefficient is also used. The critical ripeness coefficient indicates the maximum ripeness limit of the product.

It is not recommended to use the critical ripening coefficient, usually the practical ripening coefficient is selected 10-15% less than the critical value.

REFERENCES:

1. Фарукшин В.В. Совершенствование методов расчета вытяжных механизмов для мокрого прядения льна. Дис... канд. техн. наук. - Кострома, 1999.
2. Анисимов И.В. Некоторые элементы основ прядения // Текстильная промышленность. - 1948. - №1, 2.
3. Афончиков Ф.А. Определение момента изменения скорости волоконна в вытяжном поле // Сб. научно-исследовательских трудов. - М., 1947.
4. Jahongir, S. (2020). Philosophical views of Umar life. *Academicia. An International Multidisciplinary Research Journal.*—India, 10(4), 360-364.

5. Shodiev, J. J. (2020). Interpretation of moral facts in the opinions of Umar Khayyam. *International engineering journal for research & development.-India*, 5(3), 143-148.
6. Шодиев, Ж. Ж. Interpretation of the image of may in the ruba of Umar Khayyam. *Monografia pokonferencyjna science, research, development*, 33, 2020-30.
7. Шодиев, Ж. Ж. (2020). Умар Хайём фалсафий қарашларида инсон тақдири ва эркин ирода масаласи. *Наманган давлат университети Илмий ахборотномаси*, 2, 197-204.
8. Шодиев, Ж. Ж. (2020). Умар Хайёмнинг асосий асарлари ва рубойларининг тузилиши, мазмуни ва таҳлили. *Илм Сарчашмалари.-Урганч*, 10, 44-47.
9. Шодиев, Ж. Ж. (2020). Умар Хайём рубойларининг талқин ва тавсифи. *Наманган давлат университети Илмий ахборотномаси*, 9, 206-210.
10. Шодиев, Ж. Ж. (2020). Умар Хайёмнинг ижтимоий-ахлоқий қарашлари. *Фалсафа ва ҳуқуқ.-Тошкент*, 3, 107-110.
11. Shodiev, J. (2021). The problem of knowledge in the philosophical views of Umar Khayyam. *Imam al-Bukhari IBS Journal*, 2.
12. Шодиев, Ж. (2022). Илк уйғониш даврида–комил инсонни шакллантириш ватарбиялашда тасаввуф таълимотининг ўрни. *Scientific Bulletin of NamSU-Научный вестник НамГУ-NamDU ilmiy axborotnomasi–2022-yil_4-сон*, 229.
13. Шодиев, Ж. Ж. Мамлакатимизда инсон қадрини юксалтиришнинг ижтимоий-фалсафий масалалари. *Қарду хабарлари. Илмий-назарий, услубий журнал. Махсус сон (Ижтимоий фанлар)*.
14. Shodiev, J. J. (2020). INTERPRETATION AND DESCRIPTION OF UMAR KHAYYAM RUBAYA. *Scientific Bulletin of Namangan State University*, 2(9), 206-211.
15. Jurakulovich, S. J. (2022). AGAINST IGNORANCE-FIGHTING WITH ENLIGHTENMENT THE MAIN CRITERIA IN IMPROVING HUMAN VALUE. *Web of Scientist: International Scientific Research Journal*, 3(10), 1160-1164.
16. Jurakulovich, S. J. (2022). ATTITUDE TO HUMAN DIGNITY IN THE PERIOD OF AMIR TEMUR AND TEMURIDS DYNASTY. *Web of Scientist: International Scientific Research Journal*, 3(5), 43-47.
17. Shodiyev, J. (2021). JAMIYATDAGI MEHNAT MUNOSABATLARI SHAROITIDA MA'NAVIY SALOHİYAT. *Журнал истории и общества*, (2)
18. SHODIEV, J. (2021). SOCIO-POLITICAL LIFE AND THE DEVELOPMENT OF SCIENCE IN THE PERIOD OF UMAR KHAYAM. *ЦЕНТР НАУЧНЫХ ПУБЛИКАЦИЙ (buxdu. uz)*, 1(1).

19. Shodiyev, J. (2021). O‘ZBEKISTONDA IJTIMOIIY-SIYOSIIY KOMMUNIKATSIYA RIVOJLANISHIDA RAQAMLI TPANSFORMATSIYA SIYOSATI. Academic research in educational sciences, 2(2), 409-416.
20. Shodiyev, J. J. (2020). U THE QUESTION OF HUMAN DESTINY AND FREE IN THE PHILOSOPHICAL VIEWS OF OMAR KHAYYAM. Scientific and Technical Journal of Namangan Institute of Engineering and Technology, 2(2), 197-202.
21. Shodiev Jahongir Jurakulovich. Interpretation of moral facts in the opinions of Umar Khayyam. International Engineering Journal For Research & Development 2020/4/16.
22. Jurakulovich, S. J. (2023). The role of the national idea in increase of human values. Web of Scientist: International Scientific Research Journal, 3(10), 1160-1164.
23. Shodiyev Jahongir Jo‘raqulovich. Inson qadri va uning huquqlari eng oliy qadriyat: tarixiy-huquqiy meros. Ilm sarchashmalari/ Urganch – 3.2023. 19-21.
24. Shodiyev, J. J. (2023). THE ROLE OF SCIENTIFIC THINKING AND MENTAL DEVELOPMENT IN IMPROVING HUMAN DEVELOPMENT AND VALUE. Innovative Development in Educational Activities, 2(9), 251-261.
25. Shodiyev, J. J. (2023). THE ROLE OF THE NATIONAL IDEA IN INCREASE OF HUMAN VALUES. Innovative Development in Educational Activities, 2(7), 616-625.
26. Jurakulovich, S. J. (2023). PHILOSOPHICAL VIEWS OF SAGES ON HUMAN VALUES AND GLORIFYING HIM. THEORY AND ANALYTICAL ASPECTS OF RECENT RESEARCH, 2(16), 229-238.
27. Шодиев, Ж. Ж. (2023, June). ЗНАЧЕНИЕ ИСТОРИЧЕСКОГО МЫШЛЕНИЯ В СОЗДАНИИ ФУНДАМЕНТА ТРЕТЬЕГО ВОЗРОЖДЕНИЯ И ЕГО ЗНАЧЕНИЕ В УКРЕПЛЕНИИ ЧЕЛОВЕЧЕСКИХ ЦЕННОСТЕЙ. In INTERNATIONAL SCIENTIFIC RESEARCH CONFERENCE (Vol. 2, No. 15, pp. 124-130).
28. JJ Shodiev. [A STEP TOWARDS HUMAN DIGNITY](#). GOLDEN BRAIN 1 (24), 59-67.
29. Раков А.П. Одноремешковый вытяжной прибор на хлопкопрядильном ватере. - М.: Гизлегпром, 1947.
30. Аврелькин В.А., Никифорова Е.Н., Вавилов Е.Г., Лапшин В.Г. Регулирование силы вытягивания в двухрешковом вытяжном приборе // Современные технологии и оборудование текстильной промышленности. Тез. докл. Всероссийской научно-технической конференции. — Москва, 2001.

31. Murodov, S. A. (2022). Relationship between the universe and man in the works of Fariduddin Attor. In International conference: problems and scientific solutions (Vol. 1, No. 6, pp. 35-41).
32. Мурадов, С. А. Современные методы философии и их значение в развитии мышления человека. Актуальные исследования, 51.
33. Мурадов, С. А. (2009). Ибн Сино, Аттор ва Навоий асарларида кушлар тимсоли. Имом ал-Бухорий сабоқлари», Маънавий-маърифий, илмий-адабий журнал. Тошкент, 273-276.
34. Мурадов, С. А. кизи Касимова, ФФ (2022, December). ФИЛОСОФИЯ ДИЗАЙНА: ОСОБЕННОСТИ И СУЩНОСТЬ. In INTERNATIONAL CONFERENCE: PROBLEMS AND SCIENTIFIC SOLUTIONS (Vol. 1, No. 7, pp. 51-59).
35. Санжар, М. (2020). Взгляды Фаридуддина Аттара на бытие. Международный журнал прикладных исследований. ИДЖАР, 6(6), 34-36.
36. МУРАДОВ, С. А. СОЦИАЛЬНО-ФИЛОСОФСКИЕ ВЗГЛЯДЫ ФАРИДУДДИНА АТТОРА. МОЛОДОЙ УЧЕНЫЙ Учредители: ООО" Издательство Молодой ученый, 51, 529-531.
37. Aslonovich, M. S., & Zaynura, M. (2023, June). NATIONAL DRESSES OF CENTRAL ASIA: AS A COMPONENT OF" CULTURE OF DESIGN". In INTERNATIONAL SCIENTIFIC RESEARCH CONFERENCE (Vol. 2, No. 15, pp. 170-177).
38. Aslonovich, M. S., & Zaynura, M. (2023, June). NATIONAL DRESSES OF CENTRAL ASIA: AS A COMPONENT OF" CULTURE OF DESIGN". In INTERNATIONAL SCIENTIFIC RESEARCH CONFERENCE (Vol. 2, No. 15, pp. 170-177).
39. Мурадов, С. А. (2023, June). ФАРИДУДДИН АТТОР-ВЕЛИКИЙ ШЕЙХ ВОСТОКА. In INTERNATIONAL SCIENTIFIC RESEARCH CONFERENCE (Vol. 2, No. 15, pp. 149-160).
40. Muradov, S. A. (2023). THE MAIN IDEAS OF THE FOUNDER OF THE GERMAN SCHOOL OF PHILOSOPHY. Innovative Development in Educational Activities, 2(7), 588-594.
41. Sanjar, M. One of the Factors of Purity of the Heart is Futuwat. International Journal of Innovations in Engineering Research and Technology, 98-101.
42. Sanjar, M. (2020). The views of Fariduddin Attar on being. International journal of applied research. IJAR, 6(6), 34-36.
43. Гинзбург Л.Н. Процесс вытягивания в льнопрядении // Текстиль-ная промышленность. - 1948. - №7.