



DEVELOPMENT OF WIRE GASKET ON MODERN ELECTRONICALLY CONTROLLED WEAVING MACHINE

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Article history:	Abstract:
Received: 4 th July 2023 Accepted: 7 th August 2023 Published: 8 th September 2023	In this article, the patterns and peculiarities of Uzbek national fabrics, the essence of the colors in them, and the types and forms of new types of pattern design are considered.

Keywords:

Presidential Decree "On additional measures to support the productive use of existing pastures in the republic, processing of silk and wool" (PQ-5178, 08.07.2021), On the basis of the decision of the President of the Republic of Uzbekistan dated March 29, 2017 on the measures to organize the activities of the "Uzbekipaksanoat" association. After that, the silk industry developed rapidly, and in the next four years, more than 10 decrees and decisions on the development of the industry were adopted. According to the information service of the "Uzbekipaksanoat" association, it is worth noting that in order to order raw silk, silk wool and silk products, a chain-like system from 0 to 100 has been established in the field of cocooning. confessed. It is a gratifying fact that through this system, first of all, permanent employment of the population is provided. The indicators of the export of silk products by the enterprises of the system are also increasing year by year. In particular, in 2019, the value of cocoon products was exported in the amount of 51.1 million US dollars, and in 2020 this figure was 70 million US dollars. 71 million in 2021. Coir products are being exported in the value of US dollars. The practical expression of the reforms certainly imposes huge tasks on the researchers.

It is known that avry fabrics are widely used in our people as various national clothes[1]. Improving the quality of these tissues, making full use of the existing raw material base and creating new types is one of the important and urgent issues. Adras is a type of fabric, the body thread is made of natural silk, and the back is woven from thick thread. Yellow, blue, pink, and red colors are used in the flowers in an abr method.

Among these fabrics that are widely produced in Central Asia, textile fabrics produced by the traditional technology of the silkworm "abr" meaning "cloud" are of special interest. Abra-ikat is the name by which these fabrics are known in the West. Every school of silk weaving in Central Asia was famous for its decorative arts. The composition of the Abr drawing was distinguished by various patterns. They got their name from the geometric, natural animalistic patterns they resembled. The most famous are: *kapalak* (butterfly), *ilon oson* (snake trace), *gajak* (earring pattern), *bodom* (almond), *taroqcha* (comb), *chaqiriq* (echo), *amulet* (talisman), *taroq* (comb), *dars* (sickle), *daraxt* (tree), *anor* (pomegranate), *oy* (moon), *shoh* (horn), *nogora* (tympani), *chayon* (scorpion), *patnis nusxa* (tray), *bargi-karam* (cabbage leaves), *tagalyak* (ram's horn).

Currently, the patterns of Adras, Khan-atlas, Beqasam, Banoras fabrics, which are produced in our country, are made from various objects, nature and the unique patterns are symmetrically placed in the avrband method. Patterns in all tissues developed in this way are repeated in a symmetrical position and are in a static position. The ratio of the pattern in the fabric in the direction of the warp threads, that is, the ratio of the width of the fabric, is always greater than 1.

$$R_{pattern a} > 1 \quad (1)$$

here: $R_{pattern a}$ - is the ratio of the pattern on the back.

The following table lists the main technical indicators of the fabric with amulet pattern.

The main technical indicators of tumorch pattern fabric

Table-1

№	Technical indicators	Units	Values
1	The name of the tissue	-	National gas mask with amulet pattern



2	Machine type	-	MBJ-6 (Switzerland)
3	Raw material type: - in the warping - weft	-	cotton thread cotton thread
4	Linear density of threads: - in the warping - weft	teks teks	25 18
5	Warping and weft thread densities: - in the warping - weft	yarn/dm yarn/dm	280 170
6	Fabric width:	sm	42
7	Warping thread tension	sN	12-14

As can be seen from the table, the linear density of the warping yarn is a bit thicker than that of the warp yarn. Also, the density of warping yarn per 1 dm is 2 times less than that of jute yarn. It can be explained as follows: in other traditional fabrics, in general, the ch/z of the warping yarn is low, and the linear density of the cotton yarn is high. The peculiarity of the national gazlama is that, because the pattern ornament is drawn on the warping thread in this way, the area occupied by the warping threads is higher on the surface of the fabric compared to the weft thread in order to make the surface of the pattern on the warping thread attractive.

In Central Asia, among the national aura fabrics, such as "Khan-atlas", "Adras", "Avrli Beqasam", "Banaras" are produced on looms. In the production of woven fabrics, a pattern is created on the warping threads before weaving using the avrband method. The program of the pattern and the meaning in it are created according to the direction of the warping iplpri. These gauzes are knitted in one layer. Today, the introduction of new modern techniques and technologies in weaving, like all industries, creates opportunities to increase the types of fabrics produced and improve their quality indicators. The use of modern machines not only increases the type and quality of the produced fabrics, but also makes the working conditions of the workers somewhat more comfortable.

The purpose of the work is not only to draw patterns on warping threads on modern electronically

controlled looms for the production of woolen fabrics, but also to create different patterns similar to the pattern of woolen fabrics using program-controlled jacquard machines.

The advantage of creating beautiful patterns on jacquard machines is that it is possible to weave new patterns with the help of multi-colored yarn in a short time after preparing a program of various patterns. When creating a pattern in this method, the main attention is paid to the correct selection of yarn, taking into account the harmony of their colors. It is worth mentioning that using the existing method in these looms, it is possible to produce fabrics with patterns printed only on warping threads. Also, it is possible to increase the attractiveness and marketability of the fabric with new patterns on the patterns printed on the threads. Another convenience is that when taking a pattern, the ratio of the pattern printed on the warping thread is created in the direction of the warping threads, and in the jacquard method, it is possible to get the pattern in relation to the width and length of the warping threads. A number of research works have been carried out to create new types and patterns increased. Figure 1 below shows a copy of a fabric produced on a modern electronically controlled MBJ-6 (Switzerland) jacquard machine. "Corel Draw" and "Mukad" programs were used in fabric production. He took part in weaving four colors of multi-colored accessories. The width of the loom is 100 cm. weft threads were thrown on the rapier to form [2].



Figure 1. A copy of the fabric produced on a modern electronically controlled MJB-6 jacquard machine

The most similar features of the new avrli gazlam to the existing national gazlam are that the colors in the pattern overlap to a certain extent. The reason for this is the use of the national avrband method in the new fabric as well [3,4,]. In this method, the patterns in the production of Avrli gauzes are of better quality and look more attractive compared to the existing method. It requires artists to always be in search and work on new patterns.

Based on the content of the fabric width pattern report R_{nnaksh} , taking into account the width of the loom B_d , a whole pattern report is created. For example, the width of the machine is 100 cm. when creating a program, the number of pattern reports is n_H ,

$$n_H = \frac{(B_d - 2)}{R_H},$$

(2)

will be. R_{nt} is not limited in the direction of the pattern, but the size of the pattern must be specified in the program. The company is also conducting practical research on the production of two- and three-layer suits and clothing fabrics on a jacquard machine. At the same time, cotton and chemical fiber yarns are also used in the weaving of yarns. obtaining patterns is achieved. Pattern configurations with ratios of 15 to 50 threads and more can be easily obtained for both three- and four-ply yarns. Currently, this issue is considered urgent in the enterprises of our Republic, because in many enterprises, two or three types of assortment are produced in simple cuttings, which reduces the competitiveness of the fabric in the market conditions.

In order to develop the fashion industry, to reinterpret the rich heritage accumulated over the centuries and use it in the modern art process, the "Symbol of Asia", "Haute couture" festivals, "Big City Lights" annual fashion show, "Art Week Style. Uz", "Tashkent Fashion Week" and modern traditional national fashion art are regularly researched on our national costumes

SUMMARY

A new structured air gauze copy was produced on a loom equipped with a modern electronically controlled MJB-6 jacquard machine of Switzerland. It is recommended to use the produced gauze as a suit, cloak and other national items. The technological processes and properties of the new gas are being researched.

REFERENCES

1. Siddikov P.S. Technology and equipment of textile products. "Science and Technology", Tashkent. 2012. B. – 54-58.
2. Siddikov P.S., Ilyasov O., Habibullaev Kh. Computer design and rapid production of fabric structure and pattern on a modern MJB-6 electronically controlled jacquard machine. Tashkent, TTESI. 2018. -16 p.
3. Siddiqov P.S., N.B.Yusupova. National avrova fabrics and peculiar production technologies // Proceedings of the uzbek-japan symposium on ecotechnologies Innovation for sustainability-harmonizing science, technology and economic development with human and natural environment 2016, t.126



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4. P.S.Siddikov, N.B.Yusupova, I.B.Rakhmonov. Dependence of pattern rapport of national famous fabrics such as "Khan atlas", "Adras" on equipment construction // Namangan Institute of Engineering Technology Scientific and technical journal., ISSN 2181 – 8622, 2018y No. 1, pp. 54-59.