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RESEARCH OF THE TECHNOLOGY OF OBTAINING TWO-LAYER KNITTED FABRICS IN A NEW STRUCTURE OF A FLAT TWO-NEEDLE KNITTING MACHINE WITH THE NEEDLES PLACED IN A RUBBER ARRANGEMENT

J. Z. Borotov,
K. M. Xoliqov,
N. N. Yoqubjanov,
M. M. Mukimov

Zamonaviy ikki yassi ignadonli trikotaj to'quv mashinalarining texnologik imkoniyatlaridan foydalanib, ignalari lastik tartibda joylashtirib ishlab chiqarilgan yangi tuzilishli ikki qatlamli trikotaj to'qimalarining olish texnologiyasi tadqiq etilgan.

Kalit so'zlar: lastik, igna, ikki qatlamli, trikotaj, texnologiya.

С использованием технологических возможностей современных двухфонтурных плосковязальных машин исследована технология получения двухслойных трикотажных полотен новой структуры, изготавливаемых путем расположения игл по ластичному положениями.

Ключевые слова: ластик, иглы, двухслойный, трикотаж, технология.

Using the technological capabilities of modern double bed flat knitting machines, the technology for producing double-layer knitted fabrics of a new structure, made by arranging the needles in rib positions, has been studied.

Key words: ribana, needle, double-layer, knitting, technology.

Currently, research work is being carried out on the improvement of flat needle machines, often in these works polyacrylonitrile yarns are used in the weaving process [6]. The German company "Stoll" produced variable class machines. For example, cars of class 5.2 can be used as cars of classes 5 to 10, and cars of classes 6.2 and 7.2 as cars of classes 7 to 12 and 7 to 14, respectively. Thus, depending on the required class of the machine, it is possible to weave one needle or on each needle. In machines of class 5.2, depending on the linear density of the thread, it is possible to knit on every third needle.

From the results of the conducted scientific research, it was found that it is important to develop new methods and technologies for obtaining two-layer knitted fabrics with a new structure due to the expansion of the assortment, saving the consumption of raw materials, and the use of mixed knitted fabrics in the composition of the fabric.

According to him, in order to solve the actual problems mentioned above, the technology of obtaining two-layer knitted fabrics of a new structure was developed. 6 variants of two-layer knitted fabrics of the new structure were woven on a 14-class flat two-needle knitting machine manufactured by the Chinese company Long Xing LXA 252 SC.

It is known that obtaining mixed fabrics in the repetition of fabric rows or individual elements in a certain order is one of the most promising directions for creating a new assortment of knitted fabrics. One of them is dubrilinization of single-layer fabrics in the weaving method. In two-layer knitted fabrics, these fabrics are connected to each other by loop elements during the knitting process.

In order to expand the assortment of knitted fabrics, reduce the consumption of raw materials and improve the quality indicators, the technology of taking two-layer knitted fabric samples obtained in a new structure was developed.

Accordingly, two-layer knitted fabrics of a new structure were woven using polyacrylonitrile (PAN) yarn with a linear density of 30 tex x 2. The new two-layer knitted fabric samples differ from each other in the production method and the change in fabric structure.

Double-layer knitted fabric samples of the new structure were knitted on a flat double-needle knitting machine in the following order.

Variant III, the general rapport of the two-layer knitted fabric consists of four rows, in the movement of the knitting machine carriage from left to right, in the production of the I-row of the fabric, full loops of the front needle are formed due to the fact that the needles of the front needle are raised to the completion process, and because the odd number of needles of the back needle are raised to the completion process knits the press half-loops of the back layer. Needles with an even number do not rise to the completion process and do not participate in the process of forming a ring (Fig. 1).

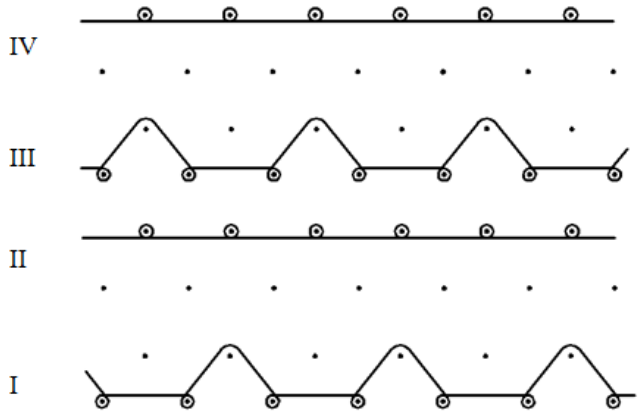

Figure 1. A graphic record of a two-layer knitted fabric (variant III) in a new structure.

And in the production of the second and fourth ring rows, all the needles of the back needle are raised to the finishing process to form the glad ring rows for the back layer. The front knitting needles do not participate in the loop formation process. When knitting the III row of loops, the front knitting needles are raised to the completion process and knit the full loops of the front layer. As the even-numbered needles of the back needle are raised to the finishing process, the press of the back layer knits the half-loops. And the odd numbered needles do not rise to the completion process and do not participate in the loop formation process. As a result, version III of the two-layer knitted fabric with a new structure is produced.

As a result, new assortments of two-layer knitted fabrics with a new structure were woven due to the arrangement of the knitting needles of the flat-needle knitting machine in a rubber pattern, as well as the development of a new technology for obtaining knitted fabrics.

Taking into account the high shape and heat retention properties of the obtained knitted fabric, it is appropriate to use it in the production of outer knitted products.

Literature

1. Поспелов Е.П. Двухслойный трикотаж. - М., Легкая и пищевая промышленность, 1982 г., с. 208.

2. Anand, S.C. Technical Fabric Structures-2. Knitted Fabrics (Book Chapter) Handbook of Technical Textiles: 2015. Second Edition. 1, с. 107-162.

3. Патент № 2191854 (Россия), МПК7D 04 B 1/00. Последовательный способ получения двухслойного триотажа на четырехфонтурной плосковязальной машине. Романенко Ю.А., Пьяникова Э.А., Диев О.Г.. Заявл. 04.12.2000. Опубл. 27.10.2002.

4. Мукимов М.М., Ханхаджаева Н.Р. Четырех ластичный трикотаж // Тўқимачилик муаммолари. Тошкент. 2004. № 3, 50-53 бетлар.
5. Ханхаджаева Н.Р., Юнусов К.З., Мукимов М.М. Новые виды трикотажа на базе двух ластичного переплетения // Тўқимачилик муаммолари. Тошкент. 2005. №1, 29 бет.
6. 01.06-12В.43. «Тенденции развития плосковязальных машин» Легкаяпромышленность. 2001 г. №6. стр. 4. Prosandconsofcomplete garnment production on the knitting machine. Millington John. Afr. Text. 2000, June-Jule. Англия. 23-24 бетлар.
7. Н.Р. Ханхаджаева «Разработка технологии получения штучного трикотажаплюшевым переплетением на плоскофанговой машине» Автореф. дисс. канд. техн. наук. Тошкент. 2006. 20 бет.
8. Е.П. Поспелов. Двухслойный трикотаж. М.: Легкая и пищевая промышленность. 1992г. –с.27-35.