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IMPROVEMENT OF THE PRODUCTION TECHNOLOGY OF COMPLEX KNITTED SUIT FABRICS WITH MIXED COMPOSITION

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ABSTRACT

This article is intended for the production of currently relevant mixed-composition suit fabrics and describes the wide application of this technology to manufacturing enterprises throughout our Republic and the possibility of increasing economic efficiency and producing quality products.

KEYWORDS

Weft, warp, hedness, weaving program, complex weaving, one and a half layers, weave.

Introduction

Complex weaves include one-and-a-half-layered additional warp and one-and-a-half-layered additional warp, double-layered, double-and-a-half-layered, multi-layered weaves, pique weaves, pile weaves, and openwork weaves. Complex weaves can be formed by using one warp system in two warps or two warp threads in one warp. Also, two warp, two warp thread systems, and even more thread systems can be used to form such weaves. One-and-a-half-layered weaves are divided into additional warp and additional warp weaves. One-and-a-half-layered fabrics are often used in the production of heat-retaining fabrics and technical fabrics. For example, suit fabrics include drapes, technical filter fabrics.

The versatility of the machines allows for the production of fabrics from cotton, wool, silk, artificial and synthetic and mixed yarns.

The following heavy fabrics can be produced on the machines: clothing-grade woolen fabrics, light and high-density yarn fabrics, linen, synthetic and mixed yarn fabrics and other fabrics.

The production of high-quality fabrics is ensured by:

- The use of an electromechanical clutch for the drive of an alternating current motor and a machine brake that stops the machine and increases its speed

Increasing the production of a wide range of high-quality textile products in the republic "Further development of light industry and increasing the range of competitive fabrics, increasing the production capacity of finished products. As a result, the production of fabrics with complex weaves using modern technologies in the production of products of competitive quality and marketable quality

from our local raw materials, from natural fibers, mixed fibers, artificial and synthetic fibers, is one of the urgent problems of today.

Research conducted by European and Russian scientists is devoted to modern methods of fabric design J. Murphy, B. Bonn, F. Pierce, A.N. Mogilny, B.S. Bashmetov, A. Kemp, N.A. Federenko and others, whose theories on the structure of fabrics and others contributed to solving the problems of the theoretical and practical foundations of the study of the structure and properties of fabrics, with their research.

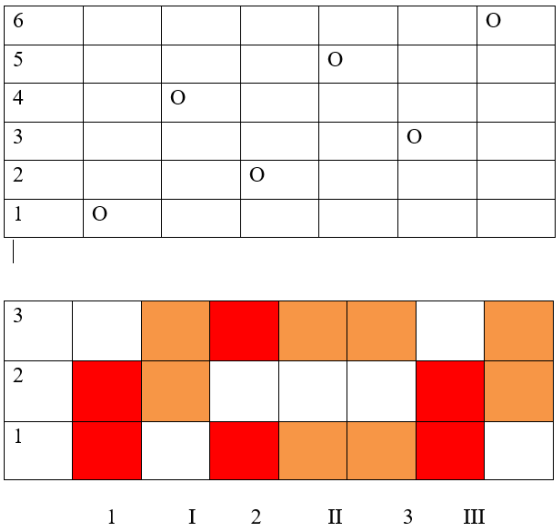
In the development of the textile industry in our republic, the following work should be carried out to produce competitive new complex weave fabrics using the assortment capabilities of modern looms

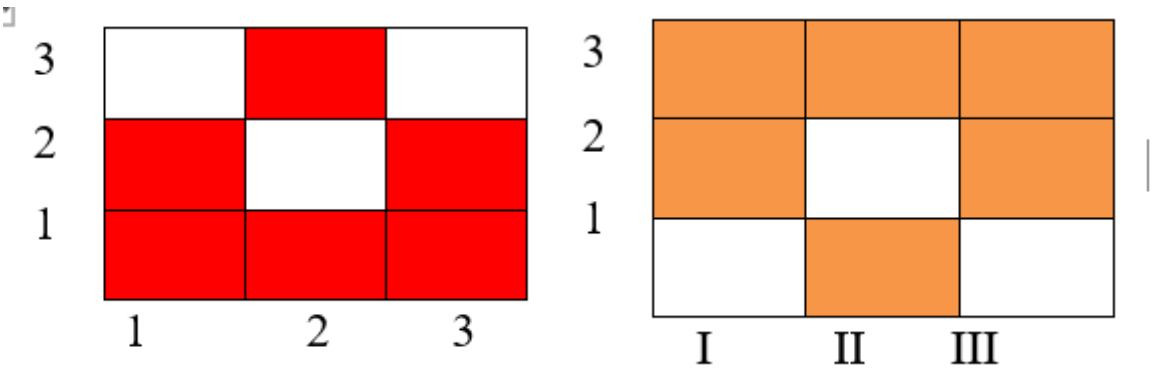
1. Analysis of complex weave fabrics
2. Development of existing complex weave fabrics on modern looms (programming).
3. Development of optimal weaving parameters for complex weave mixed-composition fabric on a modern loom
4. Analysis of yarn shrinkage in a new-composition fabric.
5. Determination of the technical and economic efficiency of a new-composition fabric.
6. Mixing The weaving of complex fabrics with a composition was analyzed
7. A complex weave suit fabric was produced on a modern weaving machine.
8. Development of a mathematical model of the parameters of the standard weaving of a complex weave suit fabric depending on the breakage of the warp threads
9. A program for the production of a complex weave 1.5-layer warp and weft fabric on modern warp and elastic rapier looms was developed.
5. The shrinkage of the yarns during weaving is determined theoretically
6. The characteristics of new complex weave suit fabrics are analyzed and their economic efficiency is increased.

The figure below shows the weaving program of a complex weave suit fabric with one and a half layers in the warp.

In this weaving program, a new pattern is created by combining two basic weaves in the warp.

One and a half layer braiding program according to the body type:



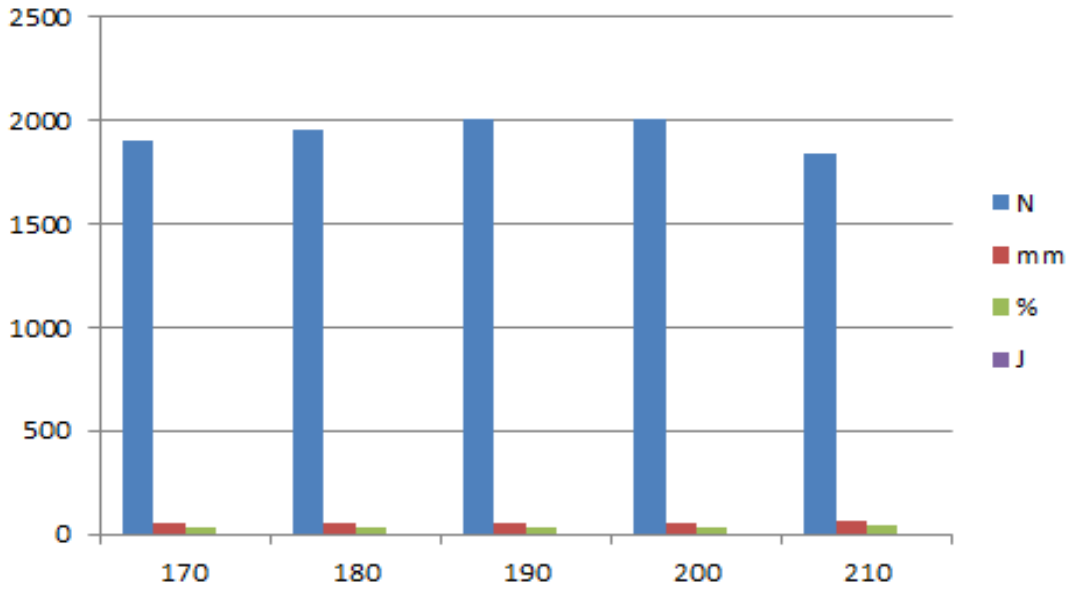


The most suitable option selected from 5 samples is 200 threads per 10 cm of the warp.

T/r	Nomlari	Birliklari	1	2	3	O`rtacha qiymat
1	Yirtilishga chidamlilik	N	594	601	562,6	585,86
2	Yirtilishdagi uzayish	mm	71,53	72	74,44	72,65
3	Yirtilishdagi cho`zilish	%	45,99	46,29	47,74	46,67
4	Yirtilishdagi ish	J	2,41	2,51	2,49	2,47

4.2.Tanda bo`yicha o`zgarmas 10sm da 380 ta ip tashlangan

T/r	Nomlari	Birligi	1	2	3	O`rtacha qiymat
1	Yirtilishga chidamliligi	N	2001	2001	2001	2001
2	Yirtilishdagi uzayish	mm	55.59	57.1	56	56.23
3	Yirtilishdagi cho`zilish	%	36.69	37.77	37	37.15
4	Yirtilishdagi ish	J	9	8.85	8.59	8.81

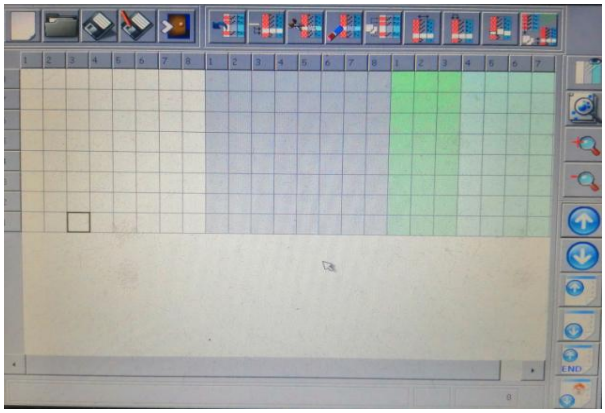


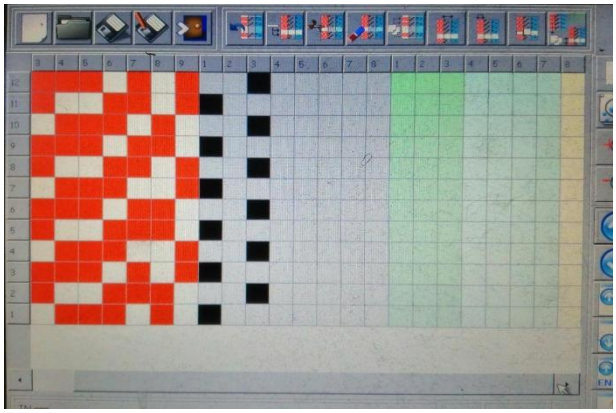
* In the economic part of this dissertation, the cost of raw materials and other costs for the production of a new patterned weave were calculated. The amount of raw materials and their prices

for weaving a new patterned weave can be given as follows. The cost of obtaining the existing patterned weave mixed weaves and the cost of the new patterned weave in the test were calculated.

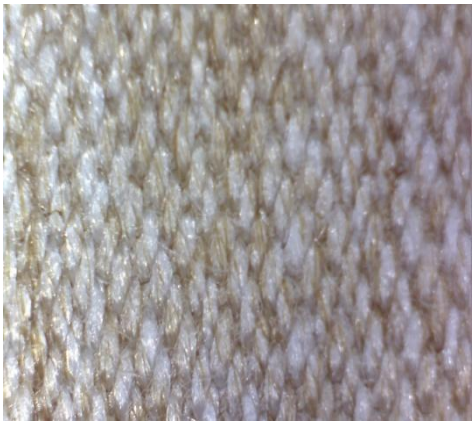
* We used a 100-comb for our twill weave. We used a 95-comb for the twill weave.
* The width of the fabric by the comb is 1.92 cm,
* The width of the raw fabric is 187 cm,
* The width of the finished fabric is 153 cm.
* 1 m^2 of the raw fabric is 222.5 gr/m^2.
* 1 m^2 in finished condition 296 gr/m^2.

Fabric weaving program





Front view of the obtained samples



Ready sample