TRIKOTAJ TO‘QIMA TUZILISHINING O`ZGARISHILARI

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Annottatsiya*:Ushbu maqolada mahalliy xomashyolardan samarali foydalanib, yangi tuzilishli, shakl saqlash xususiyati yuqori bo`lgan PAN ipi asosida olingan trikotaj to`qimasining 3 ta variant namunalarining texnologik ko`rsatkichlari tahlil natijalari va mahsulot assortimentiga tavsiyasi keltirilgan.*

Tayanch so`zlar*: naqsh, ignadon, yengil sanoat, paxta tolasi, ishqalanish, texnologiya, pishiq, issiqlik saqlash.*

Аннотация*: В статье представлены результаты анализа технологических характеристик 3-х вариантов образцов трикотажного смесового трикотажа, полученного на основе пряжи ПАН с новой структурой, высокими формоустойчивыми свойствами, эффективным использованием местного сырья и рекомендациями по применению ассортимент продукции*

Klyuchevыye slova*: uzor, rukodeliye, legkaya promыshlennostь, xlopkovoye volokno, treniye, texnologiya, vyazkostь, akkumulirovaniye tepla.*

This article *presents the results of the analysis of physical and mechanical and technological performance of 3 variant samples of knitted mixed knitted fabric obtained on the basis of PAN yarn with a new structure, high shape retention properties, effective use of local raw materials and recommendation to the product range.*

Key words*: pattern, needlework, light industry, cotton fiber, friction, technology, toughness, heat storage.*

Bugungi kunda trikotaj sanoatida ish olib borayotgan olimlaru mutaxassislar oldida yangi trikotaj to`qimalarini ishlab chiqarishda resurstejamkor texnologiyalarni ishlab chiqish, trikotaj to`quv mashinalarining texnologik imkoniyatlarini kengaytirish va mahalliy xomashyodan samarali foydalanish, bu orqali mahsulot tannarxini kamaytirish va tayyor buyumlar ishlab chiqarishda mahalliy xom ashyoni qayta ishlashni imkonini kengaytiradi. Mamlakatimizning ijtimoiy-iqtisodiy rivojlantirish yo`nalishida xom ashyo sarfini tejash bilan, mahsulot tannarxini kamaytirishga oid kompleks chora-tadbirlar ishlab chiqish va ularning ijrosini ta’minlash, belgilangan GOST va xalqaro standartlar talabiga javob beruvchi raqobatbardosh mahsulotlar yaratish zarurdir. Mahsulotlarning boy assortimenti va yuqori sifatli bo`lishi, resurstejemkor kompyuter texnologiyalarning joriy etilishi, buyurtmalarning tez bajarilishi eng talabchan mijozlar talabini qondirishga qodir.

Bugungi kunda mahalliy xom ashyolardan samarali foydalanib, tashqi ko`rinishi ko`rinishi jihatdan chiroyli, xaridorgir, sifatli trikotaj to`qimalarining yangi tuzilishlarini ishlab chiqarish, ulardan fizik-mexanik xususiyatlari yaxshi, gigiyenik va estetik jihatdan yuqori sifatli raqobatbardosh mahsulotlar assortiment turini kengaytirish talab etib

kelinmoqda. Yangi texnika va texnologiyalardan foydalangan holda ichki va tashqi bozor talabiga mos raqobatbardosh mahsulotlar bilan ta’minlash maqsadida turli xildagi trikotaj to`qima mahsulotlari ishlab chiqarishda xom ashyo tejovchi usullardan keng foydalanilmoqda.

Shakl saqlash va issiqlik saqlash xususiyati yuqori bo`lgan, ustki kiyim uchun tavsiya etilayotgan ikki qatlamli naqshli trikotaj to`qimalarining namunalari GOST talablariga muvofiq bir xil texnik sharoitda olindi, ishlatilgan PAN ipi trikotaj to`qimadagi iplarning miqdori va qo`yilishi bilan farqlanadi.

Trikotaj matolari uchun qo`llaniladigan barcha GOST va TShlarga uzilishdagi uzayish va uzilish kuchi bo`yicha me’yoriy ko`rsatkichlar kiritilgan. Uzilish kuchi deganda, ma’lum o`lcham va tezlikda namunalarni cho`zilishida uni uzish uchun sarf qilinadigan kuch tushuniladi. Uzish kuchi nьyuton birligida ifodalanadi. Sinov o`tkazilayotgan trikotaj namunalarning uzilish kuchi standart uslub bo`yicha “YG-026T”-rusumli dinomometr yordamida aniqlandi.

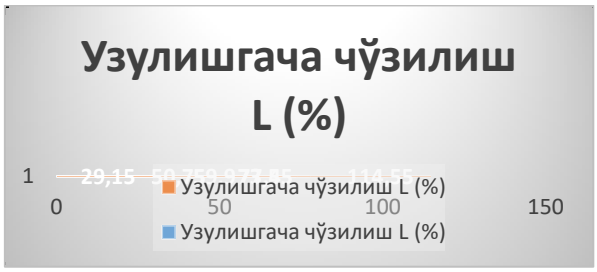
To`qimalarni pishiqligi, ya’ni uzilish kuchini tahlili shuni ko`rsatadiki, bo`yi bo`yicha eng pishiq to`qima 1- variant, uning ko`rsatkichi 269 N ga teng bo`lib, eng kam ko`rsatkich 2-variant va uning ko`rsatkichi 226 N ga teng. (1-jadval, 1 b)-rasm). To`qimani eni bo`yicha pishiqligi ham 2-variantda kuzatildi, bu to`qimani eni bo`yicha uzilish kuchi 184 N ni tashkil etib, 3-variantda eng kam uzilish kuchi kuzatildi, uning ko`rsatkichi 127 N.

Poliakrilonitrildan olingan tolalar yumshoq va teriga zarar etkazmaydi, kam g`ijimlanadi, lekin issiqlik bilan ishlov berish orqali hosil bo`ladigan plisse va buramlarni saqlab qoladi. Tola tekislanib ketmaydigan buramga ega bo`lib, boshqa sintetik tolalarga nisbatan pilling kam hosil qiladi. Suv bilan yaxshi yuviladi va tez quriydi, issiqlik saqlash xususiyati yaxshi. PAN ipidan tayyorlangan maxsulotlarni ko`p marotaba yuvish mumkin, bunda ular dastlabki ko`rinishini yo`qotmaydi. Ko`rsatilgan barcha xususiyatlar mavjudligi sababli to`qimachilik sanoatida PAN ipidan trikotaj ishlab chiqarishda, boshqa tolalar bilan aralash holda (jun, viskoza, paxta tolasi) jun gazlamalarini ishlab chiqarishda qo`llash mumkin.

Halqalar qatoridagi elementlar tarkibi va ularning miqdori halqalar qatoridagi ip uzunligiga va shu bilan trikotajning cho`ziluvchanlik xususiyatiga ta’sir qiladi. Trikotaj to`qimalarining cho`ziluvchanligi deb, sarf qilingan kuch ta’sirida uning cho`zilishi tushiniladi. Cho`ziluvchanlik sinalayotgan namunaning uzayishi bilan tavsiflanadi. Uzayish mutloq yoki nisbiy birliklarda ifodalanadi. “YG-026T”-rusumli dinomometrga qisilgan uzunligi 100 mm bo`lgan trikotaj matolari sinovdan o`tkazilayotgan vaqtda, ularning mutloq va nisbiy kattaligi bir xil bo`ladi. To`qima cho`ziluvchanligi qancha kam bo`lsa, trikotajning shakl saqlash xususiyati shuncha yuqori bo`ladi.

Xulosa qilib aytish mumkinki, trikotajning bo`yi va eni bo`yicha cho`zilish miqdori trikotaj to`qima tuzilishiga va uning tarkibidagi iplar turiga bog`liq bo`lib, GOST 28554 talablariga to`g`ri keladi va ustki kiyim assortimentiga tavsiya etsa bo`ladi.

Mahsulotlarni loyihalashda trikotaj matolari qanday qayishqoqlik xususiyatlarga ega bo`lishini bilish muhim [3].



1 a) -rasm.ntrikotaj to`qimasini to`qimasiniuzilishgacha cho`zilishi o`zgarishi gistogrammasi

1 b) -rasm. trikotaj qaytmas deformatsiya ε_n (%) o`zgarishi

Trikotajning deformatsiyalanishi iplarni qayishqoqligi, bikrligi va xalqalar sonining o`zgarishi bilan o`zgaradi. Faqatgina deformatsiyaning tavsifi emas, balki trikotajning holati ham ichki, ikkita asosiy kuch bilan aniqlanadi: xalqaga egilayotgan ipning elastiklik kuchi iplarni to`g`rilashga va shaklini o`zgartirishga intiladi. Natijada iplar oralig`ida ishqalanish kuchi paydo bo`ladi, xalqadagi iplarning joylanishiga to`sqinlik qiladi va trikotaj to`qima tuzilishiga xalaqit beradi [4,5].

Trikotaj matolari to`quvchilik gazlamalariga nisbatan sezilarli darajada yuqori cho`ziluvchan bo`lib, xatto kichik kuchlanishlar ta’sirida ham, yuqori siljuvchan tuzilishga ega. Trikotaj matolarini pardozlash uchun mo`ljallangan mashinalarning ishlash printsipi to`quvchilik gazlamalarini pardozlash uchun mo`ljallangan mashinalardan deyarli farq qilmaydi. Belgilab qo`yilganki, yuqori darajada kirishishning asosiy sabablaridan biri trikotaj matolarining pardozlash operatsiyalarida haddan ziyod deformatsiyalanishi hisoblanadi.

Xulosa qilib aytganda, trikotajning bo`yi va eni bo`yicha cho`zilish miqdori trikotaj to`qima tuzilishiga va uning tarkibidagi iplar turiga bog`liq bo`lib, GOST 28554 talablariga to`g`ri keladi va ustki kiyim assortimentiga tavsiya etsa bo`ladi. Halqa qatorlari asosida olingan trikotaj to`qimasi tuzilishiga ta’siri tufayli to`liq uning qalinligi, issiqlik va shakl saqlash xususiyatlari oshdi.

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