

SPORT KIYIMLARI UCHUN MO'LLANGAN TRIKOTAJ MATERIALLARINING FIZIK- MEXANIK XUSUSIYATLARI TADQIQI

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Annotatsiya: *Sport kiyim turlariga bo'lgan ehtiyoj va talablarni o'rganish hamda ularda yuzaga kelayotgan muammolarni bartaraf etish maqsadida zamonaviy uskunalarda asosida gazlamalar tahlili o'tkazildi. Sport kiyimlari uchun deformatsiyalanishga chidamli matolar tanlandi.*

Kalit so'zlar: *Sport kiyim, deformatsiya, uzilishdagi kuch, og'irligi, qalinligi.*

Jahonda bugungi kunda yangi texnologiyalarni joriy etish orqali to'qimachilik va tayyor tikuv-trikotaj mahsulotlari sifatini oshirishga alohida e'tibor qaratilmoqda. Jahon to'qimachilik bozorida tikuv-trikotaj mahsulotlari uchun materiallar ishlab chiqarish 120 mlrd m.kv. ni tashkil etadi. To'qimachilik va tikuv-trikotaj sanoati rivojlanishini har tomonlama tahlil qilish, raqobatning kuchayishi sharoitida jahon bozorining o'zgaruvchan konyukturasi sohani davlat tomonidan qo'llab-quvvatlanishiga, yanada barqaror va jadal rivojlanishi mexanizmlarni ishlab chiqishni taqazo etmoqda. Trikotaj asosida yangi materiallar va buyumlar ishlab chiqarishda alohida e'tibor, eksportbop mahsulotlar hajmini oshirish, chetdan kirib kelayotgan import oqimini kamaytirish va aholini o'sib borayotgan talabini qondirishga qaratilishi katta ahamiyatga ega. [1]

Ma'lumki, trikotajning to'qima tuzilishi yoki iplar tarkibi o'zgarsa, uning fizik-mexanik xususiyatlari ham o'zgaradi. Trikotaj mahsulotlaridan foydalanish vaqtida iste'molchilar uchun qulay sharoitni ta'minlovchi asosiy xususiyatlardan biri havo o'tkazuvchanlik hisoblanadi.

Havo o'tkazuvchanlik koeffitsiyenti V ($\text{sm}^3 / \text{sm}^2 \cdot \text{sek}$) quyidagi formula bo'yicha aniqlanadi

$$B = \frac{V}{S \cdot T} \text{ cm}^3 / \text{cm}^2 \cdot \text{sek} \quad (1)$$

bu yerda: V - berilgan bosim farqida mato orasidan o'tayotgan havo miqdori $\Delta R, \text{cm}^3$;

S - mato maydoni, sm^2 ;

T - mato orasidan o'tayotgan havoni o'tish vaqti, sek.

Quyidagi jadvalda trikotaj to'qimalarning fizik – mexanik ko'rsatkichlari keltirilgan.

1-jadval

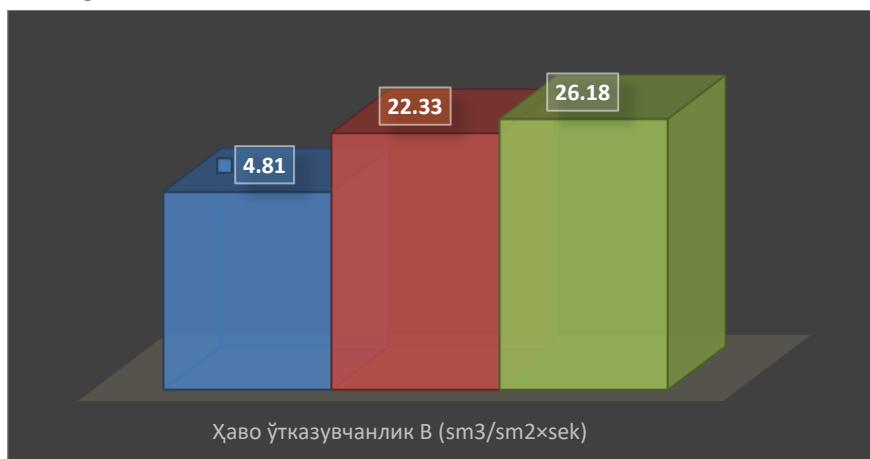
Ko'rsatkichlar	Variantlar			Standart bo'yicha
	I	II	III	
Iplarni turi, chiziqli zichliklari	Poli estr va	3 ipli	S uprem	

		laykra 2 ipli 30/150	30/75 laykrali		
Havo o'tkazuvchanlik V ($\text{sm}^3/\text{sm}^2 \cdot \text{sek}$)		4.8 1	22 .33	2 6.18	Ustki kiyim 40 -100 GOST 31410-2009
Uzilish kuchi R (N)	Bo'yi bo'yicha	85	29 7	2 01	Kamida 80N GOST 28554
	Eni bo'yicha	605	71 2	1 57	
Uzulishgac ha cho'zilish L (%)	Bo'yi bo'yicha	212 .6	16 2.2	1 33.7	6N da 40% gacha 1 grupp 6 N da 40-100% gacha- 2 guruh GOST 28554
	Eni bo'yicha	155 .1	16 8.1	2 94.2	
Qaytmas deformatsiya ϵ_n (%)	Bo'yi bo'yicha	3	12 .8	3 0	15-20% dan ko'p emas GOST 28882
	Eni bo'yicha	8	68	5 9	
Qaytar deformatsiya ϵ_o (%)	Bo'yi bo'yicha	97	87 .2	7 0	
	Eni bo'yicha	91	32	4 1	
Ishqalanishga chidamligi l (ming. aylana)		400 00 dan yuqori	40 000 dan yuqori	4 0000 dan yuqori	30-60 od-y 61-120 mustahkam GOST 16486

Yaratilayotgan kiyim-kechaklar uslubiga qarab turlicha talablarni o'z ichiga oladi, shuningdek sport buyumlari assortimenti ham tarkibida qulaylik, estetik, va ekspluatatsiya jarayonida hamda iste'molchi talabiga mos tushuvchi sport kiyimlarini yaratish uchun trikotajning 30/1 suprem va 30/150 2 ipli mato turlaridan tahlil o'tkazildi. Bunda materailarning havo o'tkazuvchanligi, uning qalinligi, matoning uzilishdagi kuchi, matoni deformatsiyasi, ishqalanishga chidamliligi aniqlandi. Suprem matosining qalinlik darajasi 0.0258 mmni tashkil qildi.

Trikotaj to'qimalarning xomashyo tarkibi bir xil bo'lib, poliestr va laykra ipidan foydalanib ishlab chiqilgan. Tadqiqot o'tkazilayotgan sport kiyimi uchun mo'ljallangan

trikotaj to'qima namunalarining havo o'tkazuvchanligi $4.81 \text{sm}^3/\text{sm}^2 \cdot \text{sek}$ dan $26.2 \text{sm}^3/\text{sm}^2 \cdot \text{sek}$ gacha o'zgardi.



1-rasm. Trikotaj to'qimalarning havo o'tkazuvchanlik gistogrammasi

Eng kam havo o'tkazuvchanlik trikotajning 1-variantida aniqlandi va uning ko'rsatkichi $4.81 \text{sm}^3/\text{sm}^2 \cdot \text{sek}$, eng ko'p havo o'tkazuvchanlik esa 3-variantida bo'ldi. 3-variantda havo o'tkazuvchanlik $26.2 \text{sm}^3/\text{sm}^2 \cdot \text{sek}$ ni tashkil etdi.

Trikotajning sifatini belgilovchi ko'rsatkichlaridan biri uning pishiqligi hisoblanadi. Trikotajning pishiqlik xususiyati uning uzilish kuchi va uzilishgacha cho'zilishi ko'rsatkichlarida shakllanadi.

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