HSR (LONDON),
HOUGHTON STREET REVIEW JOURNAL
ISSN: 2058-5519|Impact factor-15.9
http://houghtonstreetreview.com/index.php/hsr

PRODUCTION OF NEW TEXTILES FROM LOCAL RAW MATERIALS

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Abstract . This in the article local cotton raw thing based on new content tissue working dispenser , capacity 60 pcs . modern rapier weaving to the machine has was weaving enterprise technological in terms of design issues lit. The texture technician calculations , workshop worker width selection , complete throne account , thread packages and technological waste account and working release productivity done SOMET THEMA11 EX rapier weaving workbench chosen enterprise for suitability based on . Under construction of the enterprise main technical and economic indicators is calculated , its high economic efficiency (product) profitability 61.1 % , self cover (term 3.4 years) approved .

Key words . new content fabric , canvas rapier , rapier weaving machine , connection coefficient , board account , thread packaging , production release productivity , profitability , technical and economic efficiency .

Login . Uzbekistan In the Republic textile and light industry of the economy priority from networks one as consistent developing is coming . Our country high good quality cotton fiber with plenty provision industry deep specialization and product added value increase for solid ground creates . Strategy " Uzbekistan - 2030" within textile in the industry export size at least three equally increase and raw the thing again work level to 100 percent to deliver goal as defined [1, 2].

Traditional weaving from products different as , new content tissues natural and artificial of fibers to the goal appropriate combination through high hygroscopicity , air conductivity , mechanical ripeness and wide functional features provides . Such tissues local raw material based on working release to import dependency reduce and currency thrift provide opportunity gives . The subject relevance is that in the republic new content tissues working release size internal demand still complete not covering , many in enterprises and outdated equipment application product to the quality negative impact showing .

The research purpose — capacity 60 units modern weaving to the machine has was , local raw from things new content tissue working issuer weaving enterprise technological in terms of design and current UzDSt requirements answer giver tissue working of release technician and economic the basics working from the exit consists of .

Research object and Methods . Research object as canvas in the harvest working removable new content tissue (article 3540) received was done . The texture in the body and lazy threads 20 tex for linear 100% cotton, dense thread thread , gum (coastal) thread as 25×2 tex thread applied . Ready tissue Width 160 cm , weight 1 m² 60 g/m². In the body according to density 150 threads /10 cm , warp 120 threads / 10 cm , starting amount suitable 6.0 % and 5.8 % respectively .

In the study of the tissue technician calculations , workshop worker width selection , complete throne accounting , technological transitions according to thread packages and waste account and working release fertility determination according to general acceptance made analytical-calculation from the methods [3, 4]. Technical and economic indicators complete cost , income , profit and profitability elements calculation based on was evaluated .

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Results and their Analysis of the tissue **.** connection coefficient , slope coefficient and average linear density following formulas according to It was determined [3]:

$$c = (Pt \cdot Pa \cdot Tor) / (F \cdot 1000); F = (2 \cdot Rt \cdot Ra) / (tt \cdot ta)$$

$$F = (2 \cdot 2 \cdot 2) / (2 \cdot 2) = 2 .0 ; Grid = (2 \cdot 20 \cdot 20)/(20 + 20) = 20.0 \text{ tex}$$

$$c = (15 \cdot 12 \cdot 20 .0) / (2.0 \cdot 1000) = 1.800$$

Of threads diameter dt = da = $0.0316 \cdot\sqrt{(1.25 \cdot 20)} = 0.158$ mm , the thickness of the fabric in the body threads with filling coefficient Kt = 0.474, lag according to Ka = 0.379 and general filling coefficient Kto'q = 0.180 values organization These indicators of the tissue lightness and necessary strength harmony provides .

Workshop worker width choice . Makeup in the process width according to shrinkage (Home = 5.0%) and lazy of thread (Aa = 5.8%) taken , raw tissue width Bx = 160/(1−0.05) = 168.42 cm according to the blade throne width and Bt.b = 168.42/(1−0.058) = 178.79 cm as Selected SOMET THEMA11 EX rapier Nominal working capacity of the machine width 190 cm must be will be completed : 178.79 cm < 190 cm. So , this bench being designed enterprise for complete is valid .

Complete throne account as a result general in the body threads number ntt = 2 526 pieces , tooth number 95 , tooth teeth number 1,263, joy number 4, total flowers number 2,530, in number The number of observers (lamellas) is 2,526 and lamella density 3.49 lamellae / cm as marked . All values current technological standards within the scope . The texture main technical and technological The indicators are presented in Table 1 .

Table 1. The texture main technical and technological indicators

No.	Indicator name	Measurement unit	Value
1	Of threads linear density (body / stomach)	text	20 / 20
2	In the body according to density	thread /10 cm	150
3	Argoq according to density	thread /10 cm	120
4	Connection coefficient , c	—	1,800
5	Filling coefficient , No	—	0.180
6	Raw tissue width , Bx	cm	168.42
7	By the way throne width , Bt.b	cm	178.79
8	General in the body threads number , ntt	piece	2,526
9	Number of teeth	—	95
10	Shadows number	piece	4
11	1 m² of fabric weight	g/m²	60
12	Tissue surface fibrous coverage	%	38.17

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Technological equipment and productivity . Preparation line for modern , high productive equipment complex selected : bobbins again wrapping for Murata automatic machine (1 000 m/ min), body threads in groups selection for Beninger ZC-R machine (800 m/ min), honing for Beninger Ben-procam machine (133 m/ min), yarns transfer PSM -230 machine for tying UP -5 machine for fabric sorting and measurement for MKM and SB models machines . Tissue rapier method on the SOMET THEMA11 EX machine is woven .

Main shaft rotation with a speed of n = 600 rpm of the machine one unit for theoretical productivity AT_1 = (600·60·1) /(120·10) = 30.0 m/ h , useful time taking into account the coefficient (FVK = 0.85) when taken real Productivity 25.50 m/ h (42.95 m² / h) organization 60 pieces workshop , 3 shifts work mode and 300 jobs per year day (7,200 hours) of the enterprise annual working release capacity 11,016,000 m (18,554,400 m²) new content to the tissue equal It happened . for per year total 664.5 ton yarn (tanda - 616.6 t, twine - 47.9 t) is used . Body according to total technological waste 0.368 %, slag 0.083 % , raw product output is 99.632% achieved .

Feasibility study indicators . Under development of the enterprise total capital investments 59 700 million soums , workers number of 130 people (120 workers and 10 engineers and technicians employee). 1 meter of the tissue sell price 4 500 soums when annual gross revenue 49 572 million soum , work release complete cost 28 846,8 million soums , 15% tax next pure benefit and 17,616.4 million soum what organization It will be . meter of the fabric cost 2 618 soums , each per meter removable profit 1 882 soums . Main technical and economic The indicators are presented in Table 2 .

Table 2. The enterprise main technical and economic indicators

No.	Indicator	Measurement unit	Value
1	Annual working release power	thousand m	11,016.0
2	Annual working release (surface)	thousand m²	18,554.4
3	Total annual thread expense	ton	664.5
4	Total capital investments	million soum	59,700.0
5	Annual gross income	million soum	49,572.0
6	Annual complete price	million soum	28,846.8
7	Annual pure benefit	million soum	17,616.4
8	1 meter product price tag	soum /m	2 618
9	1 meter product benefit	soum /m	1,882
10	Product profitability	%	61.1
11	Selling profitability	%	35.5
12	Himself cover deadline	year	3.4

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Product profitability (61.1%) textiles industry average much higher than the level (15–25%) high is new content of the tissue in the market high added value and competitiveness confirms . Capital of investments himself cover term 3.4 years is , this in textiles new enterprises for normative within the indicator (3–5 years) that and of the project investment in terms of attractiveness shows .

Conclusion . Local cotton raw thing based on new content tissue working dispenser , capacity 60 pcs . rapier weaving to the machine has weaving enterprise complete technological based without designed . The texture technician calculations (c = 1.800, Kto'q = 0.180), complete throne account (ntt = 2 526, tig No. 95, 4 shoda), ip packages and waste account completed , SOMET THEMA11 EX rapier of the machine enterprise for suitability (Bt.b = 178.79 cm < 190 cm) was proved . One of the machine real productivity 25.50 m / h , the enterprise annual capacity 11,016,000 m of fabric arrived marked . Calculated technical and economic indicators (net profit 17 616 .4 million soum , product profitability 61.1%, self cover duration of the project (3.4 years) high economic efficiency confirms . Received results this in the direction other enterprises in design methodological basis as usage possible .

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