BG Pulse Journal USA
ISSN:1947-2536 http://www.bgpulseusa.com/index.php/bg
BG PULSE JOURNAL

UDC 677.024.1

# ANALYSIS OF A WEAVING ENTERPRISE FOR THE PRODUCTION OF CHOYSHABBOP GASKETS DOING

**Muminov Ulugbek Mamitbekovich**
Andijan state technique Institute , Associate Professor
E-mail: mirzoulugbek1980@gmail.com

**Abstract .** This in the article capacity 100 pieces rapier weaving to the machine has was bedspread gauze working issuer weaving enterprise design issues illuminated . 100% cotton fiber , canvas in the harvest working 30 tex to be issued linear dense bedspread of the fabric technological indicators — link and filling coefficients , full throne account , raw tissue and according to the blade throne widths calculating issued . Calculated parameters based on SOMET THEMA 11 EX model hard rapier weaving workbench selected , its to the project compatibility scientific based on . Workshop and of the enterprise working release productivity , annual product size and economic efficiency indicators determined . Results of the project technician in terms of based and economic in terms of effective that shows .

**Key words .** bedspread fabric , canvas rapier , rapier weaving machine , SOMET THEMA 11 EX, connection coefficient , filling coefficient , board account , employee width , work productivity , profitability .

**Login .** Textile industry Uzbekistan Republic economy strategic from networks one country industry working in the release important share " Uzbekistan - 2030" strategy textile in the industry export size noticeable increase and raw material deep again to work main task as [ 1] Local cotton raw material abundance the network intense develop for solid ground creates . Household needs between bed equipment ( sheets , blankets) and pillow volumes ) for intended bedspread to the thread demand stable is , this product high hygroscopicity , air permeability , smoothness and to wash endurance features with separated stands .

Modern without shuttlecock — rapier weaving machines traditional with a suitcase to the machines relatively high productivity , low noise , sluggish thread reliable transmission and fabric of quality one flatness with It differs . because of new weaving enterprises in design exactly rapier from machines use to the goal is appropriate . This of the work purpose — capacity 100 units rapier weaving to the machine has bedspread gauze working issuer the enterprise technological in terms of design , texture technological indicators calculation , machine model scientific justification and of the enterprise technical and economic efficiency from evaluation consists of .

**Research object and methods .** Research object as 100% cotton from fiber , in the weaving of canvas (1/1) working removable bedspread gauze acceptance was done . The texture main technician The indicators are presented in Table 1 . Technological calculations textile in enterprises technological processes design current methodological basics and from formulas using was completed [2, 3].

Table 1

**Bed sheet of the fabric technician indicators**

| No. | Indicator | Sign | Value |
|---|---|---|---|

| No. | Indicator | Sign | Value |
|---|---|---|---|
| 1 | Tissue type | — | Bed sheet |
| 2 | Mowing type | — | Canvas (1/1) |
| 3 | Ready tissue width , cm | $B_t$ | 200 |
| 4 | In the body thread linear density , tex | $T_t$ | 30 |
| 5 | Argoq thread linear density , tex | $T_a$ | 30 |
| 6 | In the body according to density , thread /10 cm | $R_t$ | 350 |
| 7 | Argoq according to density , thread /10 cm | $R_a$ | 300 |
| 8 | Fiber fibrous composition | — | 100% cotton |
| 9 | Weight per 1 m² , g/m² | M | 140 |
| 10 | Workshop model | — | SOMET THEME 11 EX |

**Results and their Analysis** of the tissue **.** 1. structure indicators . The texture connection coefficient (c) of the slope coefficient (F) and of threads average linear density ($T_{o\ r}$ ) through is defined as :

$$c = (P_t \cdot P_a \cdot T_{o\ r}) / (F \cdot 1000) \quad (1)$$

Canvas to be harvested for to weave coefficient $F = (2 \cdot R_t \cdot R_a)/(t_t \cdot t_a) = (2 \cdot 2 \cdot 2)/(1 \cdot 1) = 8.0$; of the threads average linear density $T_{o\ r} = 30.0$ tex . Substitute these values into expression (1) to put , to connect The coefficient $c = (35 \cdot 30 \cdot 30\ ,0\ )/(8,0 \cdot 1000) = 3,938$ was determined . and lazy of threads diameter $d_t = d_a = 0.0316 \cdot \sqrt{(1.25 \cdot 30)} = 0.1935$ mm. The tissue fibrous materials with filling The coefficients are $K_t = 1.016$ and $K_a = 0.871$ , and the total filling coefficient $K_{toe} = K_t \cdot K_a = 0.885$ organization will be obtained . values of the tissue dense and solid canvas to the structure has that scientific in terms of confirms .

2. Workshop and worker width choose . Make-up in the process ending taking into account the shrinkage ($U_{\gamma} = 5\ .0\ \%$) take , raw tissue width as follows is defined as :

$$B_x = B_t / (1 - 0\ .01 \cdot U_{\gamma}) = 200 / 0.95 = 210.53 \text{ cm} \quad (2)$$

Argoq of thread taking into account the input ($A_a = 5.8\ \%$) received without body according to the blade throne width : $B_{t.B} = B_x/(1-0.01 \cdot A_a) = 210.53/0.942 = 223.49$ cm. Calculated structure indicators ($c = 3.938$; $K_{toe} = 0.885$) are dense canvas tissue high at speed knitting for wide worker to the width has modern rapier the machine demand These requirements Italian company SOMET by working SOMET THEMA 11 EX model released hard rigid rapier weaving workbench complete answer gives . 230 cm workbench width calculated throne width with when compared following condition is fulfilled : $B_{t.B} < B_{i\ sh}$ (223 ,49 cm < 230 cm ). In the workshop lazy thread homuza through two hard rapier using one flat in tension transmitted , microprocessor-based management system in the body and lazy tension and of the blade tattoo strength automatic order [3, 4] .

3. The texture throne account . The texture throne account main The results are presented in Table 2 . General in the body threads number 7 368 pieces ( medium threads 7 298, coast threads

70), tooth number 165 , tooth number 165 number 3,684, congratulations quantity 8 pieces as All indicators current technological standards within to be , to be crowned right designed confirms .

Table 2

**The texture throne account main results**

| No. | Indicator | Sign | Value |
|---|---|---|---|
| 1 | Connection coefficient | c | 3,938 |
| 2 | Mowing coefficient | F | 8.0 |
| 3 | Filling coefficient | $K_{toe}$ | 0.885 |
| 4 | Raw tissue width , cm | $B_x$ | 210.53 |
| 5 | By the way throne width , cm | $B_{t.B}$ | 223.49 |
| 6 | General in the body threads number , pieces | $n_{tt}$ | 7 368 |
| 7 | Number of teeth | $N_{ti}$ | 165 |
| 8 | Teeth number , pieces | X | 3,684 |
| 9 | Shadows number , pieces | $n_{sh}$ | 8 |
| 10 | In the body density of observers ( lamellae ) , lamellae / cm | $R_l$ | 8.15 |
| 11 | 1 m² raw tissue weight , g/m² | $M_m^2$ | 126.4 |
| 12 | The texture external coverage , % | $E_{toe}$ | 86.46 |

4. Work productivity and working release program . Main shaft rotation speed n = 650 rpm , reverse according to density $P_a$ = 300 threads /10 cm when one of the machine theoretical productivity :

$$A_{t1} = (n \cdot 60 \cdot K_p) /( P_a \cdot 10) = (650 \cdot 60)/3000 = 13.0 \text{ m/ h} \quad (3)$$

Machine work coefficient (MIC = 0.96) and useful time taking into account the coefficient (FVK = 0.86) when taken one of the machine real productivity $P_{ha}^{i1} = 13.0 \cdot 0.96 \cdot 0.86 = 10.73$ m/ h ( 22.60 m²/ h ) organization 100 machines general real Productivity 1,073.3 m / h . Annual work time is 7,200 hours (300 days , 3 shifts ) of the enterprise annual working release power :

$$Q_{\gamma i\ 1} = 1\ 073\ ,3 \cdot 7\ 200 = 7\ 727\ 616 \text{ m/ year} \approx 7\ 727.6 \text{ thousand m/ year} \quad (4)$$

that is 16 269 .1 thousand m²/ year . Waste into account received without annual thread consumption 3 451 .8 tons ( 1,896.4 tons of tanna ; 1,555.4 tons of vodka ) . Preparation department all machines (Murata re wrapping automatic , Beninger ZC-R selection car , Ben- procam humiliation Transfer machine , PSM-230 and UP-5 binding machines ) productivity demand made hourly from the product high that was because of every one to the department one by one car installation was found to be sufficient .

5. Economical efficiency of the enterprise economic efficiency annual gross income , cost , profit and profitability indicators through evaluated . Home economic The indicators are presented in Table 3 .

Table 3

**The enterprise main economic indicators**

| No. | Indicator | Value |
|---|---|---|

| No. | Indicator | Value |
|---|---|---|
| 1 | Annual working release volume , thousand m | 7,727.6 |
| 2 | 1 meter of the fabric cost , soum | 7 470 |
| 3 | 1 meter of the fabric sell price , soums | 11,000 |
| 4 | Annual gross revenue , million soum | 85,003.8 |
| 5 | Total annual cost ( cost ), million soum | 57,722.9 |
| 6 | Pure profit , million soum | 23 188.8 |
| 7 | Product profitability , % | 40.2 |
| 8 | Investment profitability (ROI), % | 24.2 |
| 9 | Himself cover term , year | 4.1 |
| 10 | Total worker and employees number , person | 125 |

To the calculations according to product The profitability is 40.2 % , i.e. every 100 soums cost for 40.2 soums pure benefit to be taken shows . The enterprise himself cover term 4 .1 year is , this textile in the industry new enterprises for acceptable (3–5 years ) norm within the scope of . Raw material cost 56.8 % of the cost organization reached because of cotton thread price stability of the enterprise main financial factor is considered ; raw the thing far term contracts or cluster based on provide to the goal is appropriate .

**Conclusion .** Capacity 100 pcs . rapier weaving to the machine has bedspread gauze working issuer weaving enterprise technological , technical and economic in terms of designed . The texture structure indicators ( link) coefficient 3.938; fill coefficient 0.885) is calculated , they dense canvas structure confirmed . Calculated throne width (223 ,49 cm ) based on the SOMET THEMA 11 EX model hard rapier weaving workbench selected and his/her to the project compatibility (223.49 < 230) scientific was founded . The enterprise annual working release capacity 7 727 .6 thousand m, product profitability 40.2%, self cover term 4.1 years organization to be able determined . Obtained results of the project technician in terms of based , economic in terms of effective and to practice current to reach suitable that confirms .

## Used literature

1. Uzbekistan Republic Presidential Decree No. PF-5285 of December 14, 2017 “ Textile and sewing-knitting industry intense develop measures " On " Decree . — Tashkent, 2017.
2. Siddikov PS Textile in enterprises technological processes Design . — Tashkent: "Science and technology », 2012. — 248 p.
3. Erkinov ZE, Yuldashev JQ Weaving technology and Machine tools . Training manual . — Namangan: NamTSI , 2020.
4. SOMET THEMA 11 EX rapier weaving machine. Technical manual. — Italy : So.Me.T. S.p.A.
5. Sevostyanov AG, Sevostyanov PA Mechanic technology textile material — Moscow : Legprombytizdat , 1989. — 512 p.