

	가					
.						
	가					
가						.
		가	가	56 ^{'S}	70 ^{'S}	(lambs wool)
				,	,	(setting)
	.			가		%
.		, 1lb/in · hr				(Single Swift
Card) 3				56 ^{'S}		5 /g ,
70 ^{'S}		153 /g .			148 5	%
	—2960	($\frac{5-153}{5} \times 100=$)			(—)	
	가	.		56 ^{'S}		
1.0 5.0 lb/in · hr				.		%
3.0 5.0 lb/in · hr						.
			65 °	61 °		(number of
passes) 1 6		.		(fancy)가		
	1	.				

< 1>

生産速度	1 lb/in·hr				3 lb/in·hr			
팬시의 有無 処理回数	無		有		無		有	
1回 - 3回	47 - 36	+23%	13 - 5	+61%	87 - 62	+29%	31 - 16	+48%
1回 - 5回	47 - 21	+55%	13 - 2	+84%	87 - 52	+40%	31 - 7	+77%
1回 - 6回	47 - 34	+28%	13 - 4	+69%	87 - 76	+12%	31 - 10	+68%

1 lb/in · hr , 가

47 3 36 .

가 +23% . ($\frac{47-36}{47} \times 100 = +23\%$).

% 가

가 . 6

5

5 가 .

가 . 5

% 5

가 . 가

61% 48% .

5

. % 55%,

40% 84%, 77% 가 .

1 가

(swift unit)

. 3 lb/in · hr 3

16 1 lb/in · hr 5

21

.

,

가 가

가

가

가

.

56^{is}

, 64^{is}

(broken top), 66^{is}

(combing wool), 70^{is}

.

(feed sheet),

(feed roller),

(licker-in),

(tummer),

(tummer worker), 5

가

,

(stripper),

,

(doffer),

(oscillating comb)

24in. (61cm)

1

(hatting card)

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가

2

,

1 5

18/1000in(0.31mm)

,

12/1000in

.

가

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< 2>

구 분	직 경		표 면 속 도		침 포 의 밀도	
	in	cm	ft/min	m/min	Angle	teeth/sq in
워커(5)	7	17.7	5.6	18.5	65° - 70°	440
스위프트	46	117	1570 - 1920	479 - 586	65° - 81°	189 - 252
도 커	29	73	72 - 144	22 - 44	45° - 65°	203 - 243
편 시	11	28	2025 - 2520	611 - 769	70°	108

,

,

가

(Hewitt)

(flexible clothing) , (Chu)

가

가

가

가

가

< 3>

가

<u>Raw Material</u>	No of neps/g	% Improvement (+) or Deterioration (-)
56's lamb → 70's lamb		
P1, pass 3, f., W.F.	5 → 153	- 2960
56's lamb → 70's broken top		
P1, pass 3, f., W.F.	5 → 52	- 940
66's wool → 70's lamb		
P3, pass 3, m, W.F.	216 → 576	- 166
<u>Rate of Production</u>		
70's lamb, pass 3, m, W.F.		
P1 → P2	78 → 358	- 359
P1 → P3	78 → 623	- 699
56's lamb, pass 3, f., N.F.		
P1 → P2	36 → 48	- 33
P1 → P3	36 → 62	- 72
<u>Number of Swifts in a Card</u>		
1 → 5		
56's lamb, P3, f, N.F.	87 → 52	+ 40
56's lamb, P3, f, W.F.	31 → 7	+ 77
<u>Flexible → Metallic Workers</u>		
66's wool, P2, pass 3, N.F.	74 → 96	- 23
66's wool, P2, pass 3, W.F.	59 → 73	- 17

<u>Effect of a Fancy</u>	No of neps/g	% Improvement (+) or Deterioration (-)
Without fancy → With fancy		
56's lamb, pass 3, f, P1	36 → 5	+ 86
P2	48 → 10	+ 80
P3	62 → 16	+ 74

Roller Speeds

(i) Swift

1570ft/min → 1920ft/min

56's lamb, P1, pass1, f, NF 80 → 48 + 40

56's lamb, P1, pass3, f, NF 50 → 36 + 28

(ii) Workers

18ft/min → 52ft/min

66's wool, P2, pass3, m, NF 96 → 92 + 4

66's wool, P2, pass3, m, WF 73 → 55 + 25

(iii) Doffer

72ft/min → 144ft/min

56's lamb, P1, pass1, f, NF 187 → 74 + 60

56's lamb, P1, pass3, f, NF 213 → 96 + 55

(iv) Fancy (Metallic Swift 1920ft/min)

2025ft/min → 2520ft/min

5% → 31%

56's lamb, P2, pass1, f, 89 → 36 + 60

56's lamb, P2, pass3, f, 53 → 22 + 58

Roller Settings

(i) Worker - Swift

15/1000" → 21/1000"

56's lamb, P1, pass3, f, NF. 91 → 129 - 42

56's lamb, P1, pass6, f, NF. 143 → 256 - 80

(ii) Swift - Doffer³

12/1000" → 14/1000"

3d. Sarille, PO.5, pass3, f, NF 54 → 114 - 111

4.5d Sarille, P1, pass3, f, NF 37 → 70 - 88

(iii) Fancy - Swift

56's lamb, P2, pass 3

9/1000" from Swift →

4/1000" penetration 72 → 30 + 58

4/1000" penetration →

17/1000" penetration 30 → 19 + 37

Carding Angle

(i) Swift

65° swift → 81° swift (doffer 65°)		
56's lamb, P3, pass3, f,WF	16 → 12	+ 25
56's lamb, P3, pass3, f,NF	62 → 56	+ 10
65° swift → 81° swift (doffer 45°)		
56's lamb, P3, pass3, f,WF	17 → 12	+ 29
56's lamb, P3, pass3, f,NF	73 → 56	+ 23

(ii) Doffer

45° doffer → 65° doffer (swift 81°)		
56's lamb, P3, pass1, f,NF	70 → 73	- 4
56's lamb, P3, pass3, f,NF	56 → 56	0
55° doffer → 65° doffer (swift 65°)		
56's lamb, P3, pass1, f,NF	74 → 87	- 18
56's lamb, P3, pass3, f,NF	54 → 62	- 13

Land Area of Teeth

(i) Workers

$0.9 \times 10^{-2} \text{ mm}^2 \rightarrow 35.9 \times 10^{-2} \text{ mm}^2$		
70's lamb, P1, pass3, n,WF	57 → 104	- 82
66's lamb, P1, pass3, n,NF	35 → 54	- 54

(ii) Doffer

$1.2 \times 10^{-2} \text{ mm}^2 \rightarrow 35.9 \times 10^{-2} \text{ mm}^2$		
70's lamb, P1, pass3, n,WF	57 → 176	- 209
66's wool, P2, pass3, n,NF	96 → 346	- 260

Effect of Grinding

(i) Workers - Flexible wire⁴

(Doffer and swift unground)

Before → After

70's lamb, P0.5, pass5, f,WF	101 → 51	+ 50
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(ii) Swift - Flexible wire⁵

Before → After

70's lamb, P0.4, pass3, f,WF	57 → 54	+ 5
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Swift - Metallic wire

Before → After

56's lamb, P3, pass1, f,WF	30 → 34	- 13
56's lamb, P3, pass3, f,WF	19 → 17	+ 11

(iii) Doffer - Flexible wire⁵

Before → After

70's lamb, P0.4, pass3, f,WF 210 → 57 + 73

Doffer - Metallic wire

Before → After

56's lamb, P3, pass1, f,WF 159 → 108 + 32

56's lamb, P3, pass3, f,WF 94 → 68 + 28

56's

64's, 66's, 70's

가

가

3

가

%

P : 1" 1 lb , 0.18kg/cm · hour

P P : 2 lb/in · hr 3 lb/in · hr

Pass : 가

NE, WF :

f, m : , f , m

(land area)

3

가

%

%

가

가 (a)

, (b)

가 가 .
 , 가 235% 가

가 가 100%
가 . 가
 ,
가 가

가 .
73% .

가 82% 가 .
가 . 가 .

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 ,
80% ,
가 .(1).

- 가
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가 가

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가 가

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