

Polyester

open end

open end 가

가 open end

polyester

. 100% polyester , polyester/polynosic

polyester/

polyester

$1\frac{1}{2} \sim 2$ in(38 ~ 51mm) ,

1.2~3.0den(1.3~3.3dtex) .

$1\frac{1}{2}$ in(38mm) 가 .

OE

1.

80 (7.5tex) polyester/ (combed) 가

polyester/ (carded) polyester/polynosic

Polyester

polyester card sliver lap
 pre-drawing
 bunching 가 card
 lap pre-drawing .
 Polyester/ (carded)
 polyester/polynosic bale opener .
 .
 . Pressure
 bar draft sliver

2.

draft (carded fibre)
 . hook major hook가 hook draft
 . hook
 draft hook draft
 . 1 major hook가
 hook draft .
 draft doubling 가
 1passage, 2passage doubling

6 8, 8 10 draft 6~7 , 9~10 draft
 draft 6 가

< 1> Effect of draft distribution on yarn quality 1.5den(1.7dtex),
 staple $1\frac{1}{2}$ in.(38.1mm), 100% polyester

	Sample No.	Ends creeled	Draft	Direction of fibre hooks
1st passage	1	4	4	leading
drawframe	2	8	8	
2nd passage	1	8	8	trailing
drawframe	2	4	4	
Roving frame	1	1		leading
	2	1	4	
Ring frame	1	1	40	trailing
	2	1	20	
Yarn tenacity	1		26.7	
(gm /tex)	2		26.0	

3.

(1) Ring, Traveller

polyester

가 가 ring traveller

ring traveller 1

ring traveller 가

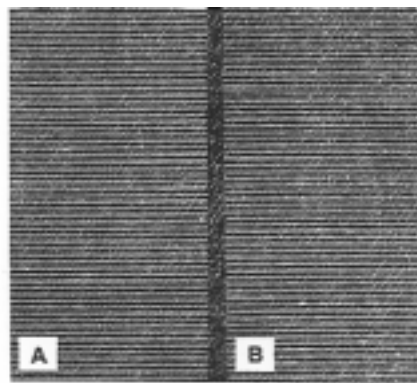
2

nep nep 가

가 spindle, ring, lappet balloon
control ring Traveller
(fly) traveller traveller 가
traveller cleaner
Ring
traveller ring



< 1> The combination of shallow flange ring and CNC traveler(left) provides a greater yarn clearance than the standard anti-wedge ring with elliptical traveler(right)



< 2> Blackboard comparison:A=ring/traveler combination as Fig. 1, left;B=combination as Fig.1, right

가 ring traveller
traveler(bow elliptical traveler) Polyester
C traveller가 clip traveller가
antiwedge ring 가

C traveller . Platt Super Spinner ring
 antiwedge ring CNC flat top traveller . 1
 ring traveller . CNC traveller ring
 traveler 가 .
 traveller . polyester
 (ring : 44mm, lift : 203mm,) traveler
 35m/sec.(spindle 15,000rpm) .
 가 가 traveller가

(2) Balloon Control Ring

balloon control ring 가 traveller

3 polyester

가

3.3dtex, 38mm polyester

가 1.7 1.3dtex(1.5 1.2den) 가

polyester 100%

ring traveller

ballooning lift

가 ring traveller

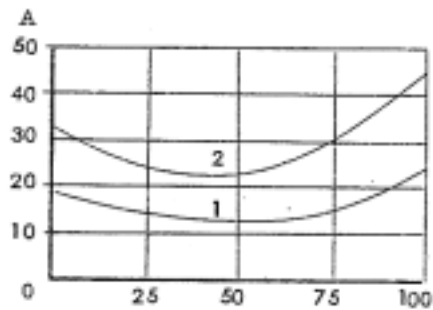
ballooning control ring

balloon ring

가 80% lift

lift ballooning 가

ballooning control ring



< 3> Effect on yarn strength of different blending proportions of two fibre components

1 single yarn

2 2-fold yarn

A yarn tenacity(gm/tex)

control ring 가

control ring

control ring

front roller

Control ring

ring control ring

2 balloon control

ring

36's(16.6tex),

1.3dtex(1.2den) 1½ in (38mm) polyester

1, 2 bobbin ballooning lift
control ring 가

Control ring control ring

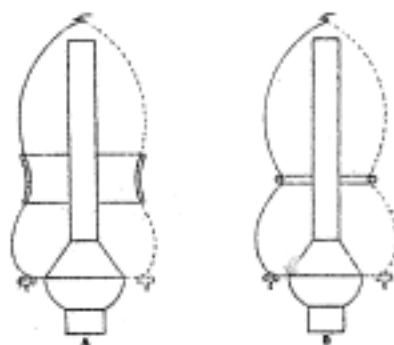
가 test 1,3

test 4

가 maker

가 , 가

가



< 4> Yarn tension and balloon control ring

A Balloon control ring with large yarn contact area(low yarn pressure)

B Balloon control ring with small contact area(high yarn pressure)

< 2> Effect of the balloon control ring on polyester yarn quality(Ring frame $8 \times 1\frac{7}{8}$ in. (203 ×

47.6mm), 2/0 elliptical traveler, cop buit bobbin)

Test No.	Bobbin build position	Spindle speed (r. p. m)	Balloon control ring in operation	Yarn tenacity (gm/tex)	Yarn regularity Uster MD%
1	bottom	10,500	yes	21.3	12.0
2	top	10,500	no	28.0	10.9
3	bottom	15,000	yes	18.7	12.4
4	bottom (lubrica- ted yarn)	15,000	yes	28.2	10.8

4.

polyester 100%

ring, traveller

traveller

traveller

가 traveller

가

18~21 (65~70)

5.

polyester 100%

○ : 24~27 (76~80)

38~42%RH

○ : 22~24 (72~76)

50~54%RH

가

air jet traveling cleaner

20~40

air conditioning system