

()

1.

가

46%

AFIS-N(Advanced fiber information system for neps)

1996 12

가

間,

內

가

品選士(classer)

가

가

가

가 .

, 가 ,

.
HVI(High volume instrument)가 ,

. 1991 (2,000
) HVI 가 .
가 ,
HVI 가
. 1997 12 HVI ()
63 1,100 . HVI ,

糸 50 80%

HVI , , ,
, HVI

2가

HVI ,

. HVI
가 ,
가 .

2. 가 ?

가 (群落) ,
()
() .

(worsted nep)

. 5
, 16 .

가

0.3 3mm ,

. 5 10mm ,
25mm .

: 가

1mm , 2 . 가
2mm , 2

. ()

+ 200% . OE + 280%

. OE OE

가

가 群(group) 가

. 1933 Pearson 15가

, Lord 5가

2가 群

.

/ : , ,

가 .

, (ovule),

, 繰綿 () (seed-coat

fragments: SCF) .

/ : () ,

.

/ / ,

AFIS-N(3.1) .

가 .(4)

3.

3.1

가 .

Pearson 가 , Bogdan

, Mangialardi 가

가 .

(cotton boll)

,

,

.

. Shaw

가

.

布

,

,

가

.

死綿

光

가

가

가

(white spot)

(fleck)

.

(specks)

(, , ,)

,

가

布

가

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가

,

.

.

1964

1989

Uster Statistics

(1, 1),

260% 가

.

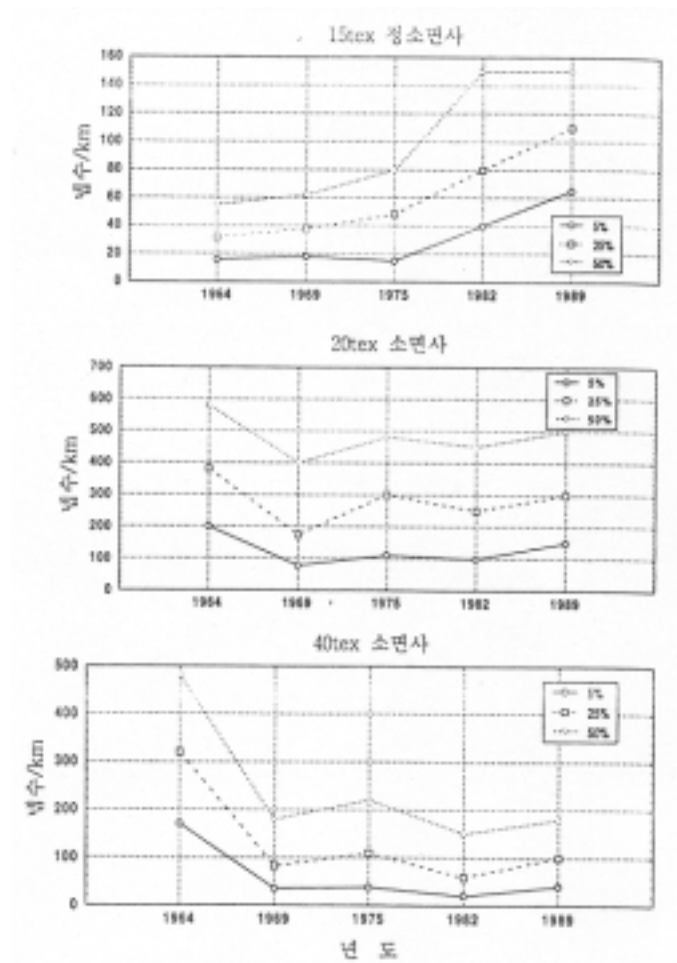
가

.

:

- ASTM Standard D1446 (1977 D3216)
- 多孔
-

,
 . 高
 ,
 1988 Knoxville Schafner Technologies社 Shofner
 AFIS-N . 2 가 ,
 1 T- ,
 , 1 L&D- ,
 . AFIS-N (SCF)
 가 .
 F&M-
 AFIS 가 . 1989 Uster社 .
 2 AFIS-N 가 , 1990
 .
 AFIS-N 1995 35 320
 , 1997 43 430 가 . AFIS-N
 가
 가 .



< 1> Uster Statistics (1964 1989)

< 1> (Uster Statistics, 1964 1989)
(5%, 25% 50%)

15tex 정소면사

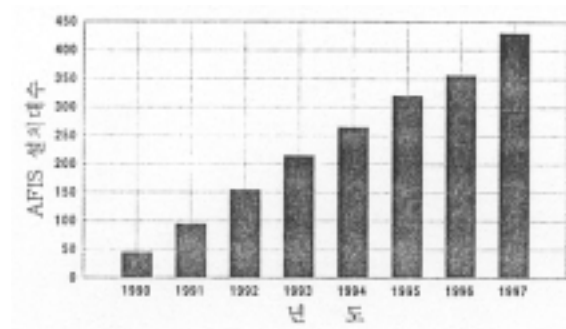
년 도	CV%	thin/1,000m	thick/1,000m	neps/1,000m
1964	13.5-15.0-16.1	2-10-23	18-44-82	16-32-55
1969	13.0-14.6-16.0	0-9-24	13-35-68	18-38-62
1975	13.6-15.0-16.0	2-13-23	17-50-120	15-48-80
1982	13.0-14.2-15.5	0-8-20	230-65-130	40-80-150
1989	12.5-13.8-14.5	2-9-23	28-75-130	65-110-150

20tex 소면사

년 도	CV%	thin/1,000m	thick/1,000m	neps/1,000m
1964	16.2-18.8-20.0	20-70-160	220-400-650	200-380-580
1969	15.5-18.0-19.2	12-32-90	75-210-450	78-175-400
1975	15.5-17.8-19.3	20-58-110	120-320-580	110-300-400
1982	14.5-16.5-18.2	7-30-80	100-300-500	110-250-450
1989	14.5-16.0-17.4	15-50-110	80-250-500	150-300-500

40tex 소면사

년 도	CV%	thin/1,000m	thick/1,000m	neps/1,000m
1964	14.5-17.0-18.5	5-24-70	140-260-480	170-320-480
1969	12.0-15.2-16.8	0-5-20	9-50-150	35-82-180
1975	12.8-15.5-17.2	0-11-25	26-100-220	38-100-220
1982	13.0-15.0-17.0	1-10-35	50-150-300	20-60-150
1989	12.4-13.6-15.2	2-12-35	25-100-200	40-100-180



< 2> AFIS

3.2 AFIS-N

AFIS-N 0.3 3.0mm ()

(seed-coat nep)

(shiny nep)

(SCF)

가 .

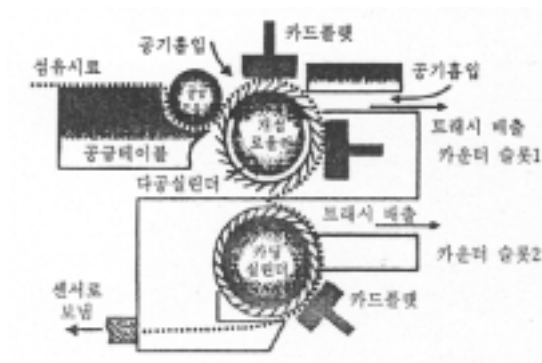
500mg

(, ,) ,

30 35cm

.

, .(3)



< 3> AFIS-N

Counterflow Slot 1 氣流

2

Counterflow Slot 2

Slot 1

2

가

가

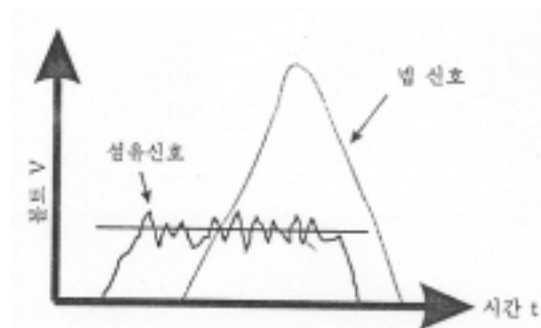
(ribbon beam of

light)

가

/

(4),
 5가 (V_{t1} V_{t5})
 1
 ,
 0 2mm 0.1mm
 , 가 0
 2,000μm 40
 DSP(digital signal
 processor)



< 4>

가 -
 AFIS-N :
 (g)
 (mm)

1g

, 1g

AFIS Autojet 30

80% .

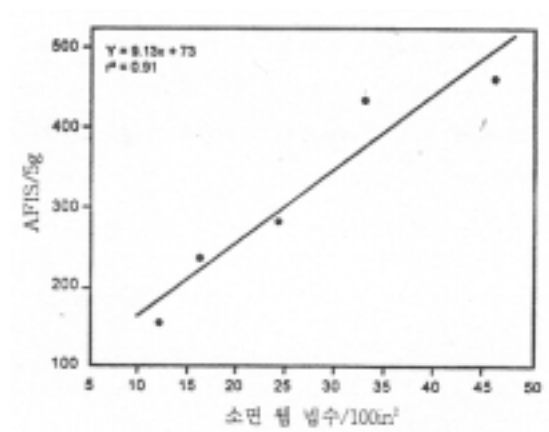
AFIS-N 3 , ASTM 50 ,

25

. AFIS-N 가

, ASTM .(

5)



< 5> AFIS

AFIS-N

,

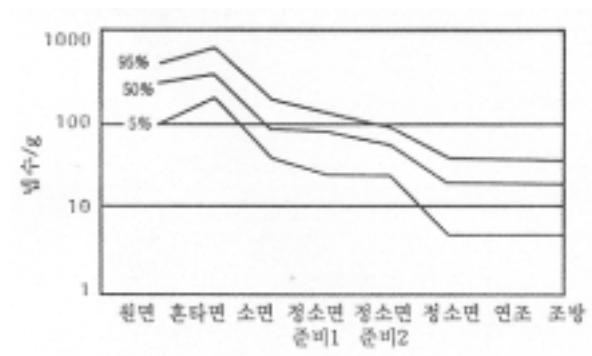
. AFIS ,
 . 1991 AFIS-N
 (CV%)
 ,
 $\pm 2.2\%$, $\pm 6.8\%$.
 (CV%)가 5%
 .
 AFIS-N 糸 Uster Nep
 Statistics
 1997 ‘ Uster Statistics 1997 ’ .(Uster News
 Bulletin No. 40) 가
 가 가 .(2,
 6) ITMF (International Cotton Testing
 Committee)
 AFIS-N .
 Trutzschler 가 -
 (nep control tester, NCT) DK803
 . AFIS-N NCT
 (r = 0.98) .
 FCT(Lintronic Fiber Contamination Tester) AFIS-N
 .
 (Uster tester 3 4)
 (integrator)
 . Frey AFIS-N
 Uster tester 3 가
 . Uster classimat ‘ A’

가 , Gupta

' A' 80 85% .

< 2> /

	/		
	5%	50%	95%
1	100	300	450
	200	400	750
	40	90	200
	30	80	130
	30	60	90
2	4	20	40
	4	20	40
	4	20	40



< 6> /

(Uster Statistics)