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每週 1 每月 1

: Fibre quality index

FQI (fibre quality index ;)

Sample

$$FQL = LS/F$$

L : Digital fibrograph 50% span length(mm)

S : 3mm guage length 纖維強度(g/tex)

F : fineness/maturity coefficient = f/m

m : maturity coefficient

f : fibre finess (micronaire)

lap (meter lap 1)

cleaning efficiency, waste, trash

waste, neps, card speeds, sliver

noils(, , delivery)

roller lapping (delivery別), sliver

TPI, , , , ,

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FQL *FQL* type lot

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가 K FQI .

K FQI .

$$K = 29.4 \left(\frac{F}{L} \right)^2$$

$$FQI = LS/F$$

L : Digital fibrograph 50% span length(mm)

S : 3mm guage length 纖維強度(g/tex)

F : fineness/maturity coefficient = f/m

m : maturity coefficient

f : fibre finess (micronaire)

. Ne 40

$$U\% = 16 .$$

L F L = 11.0, F = 2.2

U% .

< 1> 가 L F 對 K

$L \backslash F$	3.6	4.0	4.4	4.8	5.2	5.6
17.0	1.3	1.6	2.0	2.3	2.7	3.2
16.5	1.4	1.7	2.1	2.5	2.9	3.4
16.0	1.5	1.8	2.2	2.6	3.1	3.6
15.5	1.6	2.0	2.4	2.8	3.3	3.8
15.0	1.7	2.1	2.5	3.0	3.5	4.1
14.5	1.8	2.2	2.7	3.2	3.8	4.4
14.0	1.9	2.4	2.9	3.5	4.1	4.7
13.5	2.1	2.6	3.1	3.7	4.4	5.1
13.0	2.3	2.8	3.4	4.0	4.7	5.5
12.5	2.4	3.0	3.6	4.3	5.1	5.9
12.0	2.6	3.3	4.0	4.7	5.5	6.4
11.5	2.9	3.6	4.3	5.1	6.0	7.0
11.0	3.1	3.9	4.7	5.6	6.6	7.6
10.5	3.5	4.3	5.2	6.1	7.2	8.4
10.0	3.8	4.7	5.7	6.8	8.0	9.2

< 2> FQI CSP

20s Carded		26s Carded		30s Carded		40s Carded	
CSP	FQI	CSP	FQI	CSP	FQI	CSP	FQI
1400	23	1400	24	1400	25	1400	27
1500	27	1500	28	1500	29	1500	31
1600	30	1600	32	1600	33	1600	35
1700	34	1700	36	1700	37	1700	40
1800	39	1800	40	1800	41	1800	44
60s Carded		60s Combed		80s Carded		80s Combed	
1600	41	1600	34	1900	68	1900	56
1700	46	1700	38	2000	76	2000	63
1800	52	1800	43	2100	83	2100	69
1900	58	1900	48	2200	91	2200	76
2000	64	2000	53	2300	100	2300	83
—	—	—	—	2400	109	2400	90
100s Carded				100s Combed			
1900	82	2000	91	1900	68	2000	75
2100	100	2200	110	2100	83	2200	91
2300	120	2400	131	2300	99	2400	108

< 3> 가 K (U%)

K	100s	80s	60s	K	40s	30s	20s
1.5	16.6	15.3	14.2	4.0	16.4	15.3	13.7
1.6	16.9	15.6	14.4	4.2	16.6	15.5	13.8
1.7	17.2	15.8	14.6	4.4	16.8	15.6	14.0
1.8	17.4	16.1	14.8	4.6	17.1	15.8	14.1
1.9	17.7	16.3	15.0	4.8	17.3	16.0	14.2
2.0	18.0	16.5	15.2	5.0	17.5	16.2	14.4
2.1	18.2	16.8	15.4	5.2	17.7	16.4	14.5
2.2	18.5	17.0	15.6	5.4	17.9	16.5	14.6
2.3	18.8	17.2	15.8	5.6	18.2	16.7	14.8
2.4	19.0	17.4	16.0	5.8	18.4	16.9	14.9
2.5	19.3	17.7	16.1	6.0	18.6	17.0	15.0
2.6	19.5	17.9	16.3	6.2	18.8	17.2	15.1
2.7	19.8	18.1	16.5	6.4	19.0	17.4	15.3
2.8	20.0	18.3	16.6	6.6	19.2	17.5	15.4
2.9	20.2	18.5	16.8	6.8	19.4	17.7	15.5
3.0	20.5	18.7	17.0	7.0	19.6	17.9	15.6
3.1	20.7	18.9	17.2	7.2	19.8	18.0	15.8
3.2	21.0	19.1	17.3	7.4	20.0	18.2	15.9
3.3	21.2	19.3	17.5	7.6	20.1	18.3	16.0
3.4	21.4	19.5	17.7	7.8	20.3	18.5	16.1
3.5	21.6	19.7	17.8	8.0	20.5	18.6	16.2
3.6	21.8	19.9	18.0	8.2	20.7	18.8	16.4
3.7	22.1	20.1	18.1	8.4	20.9	18.9	16.5
3.8	22.3	20.3	18.3	8.6	21.1	19.1	16.6
3.9	22.5	20.5	18.5	8.8	21.3	19.2	16.7

< 1> L = 11.0, F = 5.2 K = 6.6 < 3> K = 6.6

Ne 40 U% = 19.2 .

K drafting property

FQI . K

FQI

U% 16

. Ne60 U% = 16.6

$K < 3 > K = 2.8$.
 $< 1 > K = 2.8 L = 13.0, F = 4.0$
 $L F$

$K FQI$ 가 가

$< 4 > FQI$

<i>FQI</i>	2.5% span length(mm)	Micronaire value	Maturity co-efficient
23	20.5	4.8	0.81
25	21.0	4.7	0.81
28	21.5	4.6	0.82
31	22.0	4.5	0.82
34	23.0	4.4	0.82
37	24.0	4.3	0.82
41	25.0	4.2	0.83
45	26.0	4.1	0.83
48	29.0	3.7	0.83
52	29.5	3.7	0.83
56	30.0	3.7	0.84
60	30.5	3.7	0.85
65	31.5	3.7	0.85
72	32.5	3.7	0.87
80	33.0	3.7	0.88
85	33.5	3.7	0.88
92	34.0	3.7	0.88
100	35.0	3.6	0.88
111	35.0	3.5	0.88
121	35.0	3.4	0.88
130	35.5	3.3	0.88

가

가 가

結材 < 5>

가

< 5> K U% 가

Ne	링경방기외 드레프트	粗糸의 均 削度 U%
20	19	7.0
30	21	7.0
40	22	6.5
60	24	6.6
80	25	6.0
100	28	6.0

Ne 40 F = 5.2, L = 11.0

가 U = 21.0%

F = 5.2, L = 11.0 K < 1> K = 6.6 <

3> U% = 19.2 .

가 U = 8.0% < 5> 6.5%

가

가

$$\sqrt{(19.2)^2 + (8.0^2 - 6.5^2)} = 19.8$$

$$21.0 - 19.8 = 0.6\%$$

$$U_r\% \quad d,$$

$$Ne \quad F \quad L \quad U\%$$

.

$$U^2 = 29.4 \left(\frac{F}{L} \right)^2 \frac{(d-1)Ne}{d} + 3.5(d-1) + U_r^2$$

$$CSP$$

$$CSP = (310 - Ne) \sqrt{\frac{LS}{F}} = (310 - Ne) \sqrt{FQI}$$

$$, S : 3mm \text{ guage length} \quad (g/tex)$$

$$< 2 > \quad FQI \quad CSP$$

.

$$f = 4.5 \quad \text{maturity coefficient } m = 0.82, 2.5\%$$

$$\text{span length } 24mm \quad Ne20 \quad CSP \quad 1500$$

$$CSP \quad 가?$$

$$< 4 > \quad m = 8.2, L = 4.5, 2.5\% \text{ span length } 24mm \quad FQI, FQI = 34$$

.

$$< 3 > \quad Ne \ 20 \quad FQI = 34 \quad CSP \quad 1700$$

$$CSP$$

$$가 \quad 가$$

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$$CSP \quad 1700$$

CSP FQI

$$CSP = (310 - Ne) \sqrt{FQI}$$

$$FQI = \sqrt{\frac{1700}{310 - 20}} = 34.3$$

< 4> FQI = 34.3 $f = 4.4, m = 0.82,$

2.5% span length = 23mm .

CSP 가

FQI .