

(5)

4

4.1

,

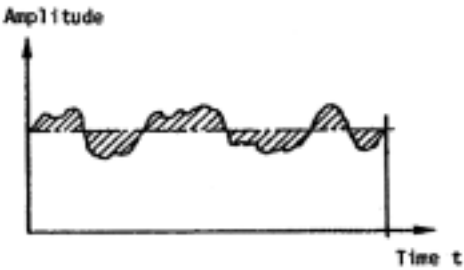
.

가

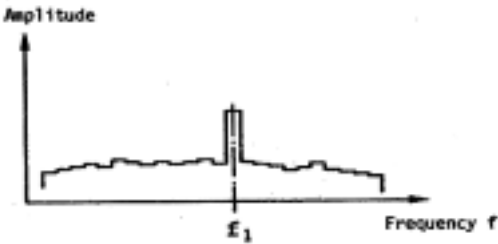
가 ,

()

.



< 4.1> :



< 4.2> : ()

가 f_1 (4.2) 가 f_1

가 .

,

,

가

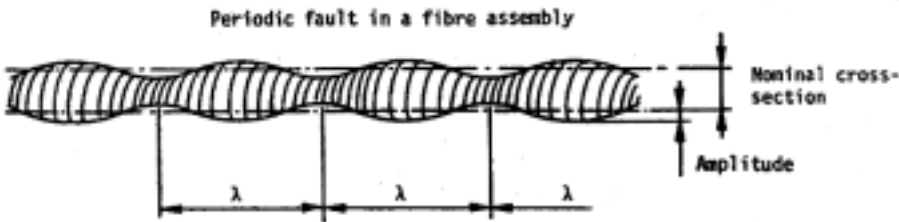
:

$f = v / \lambda$

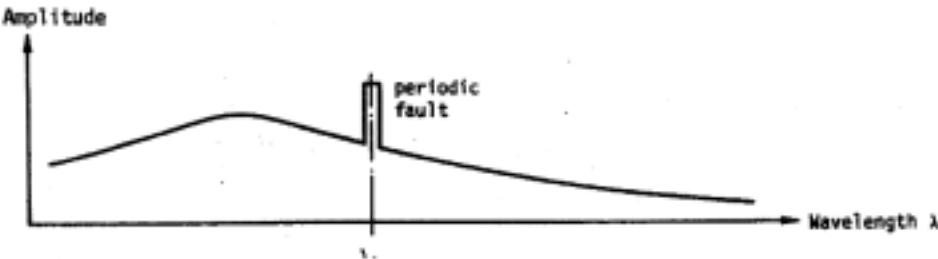
, $f = [s^{-1}]$, $\lambda = [m]$, $v = [m/s]$

(4.3),

(4.4).



< 4.3>



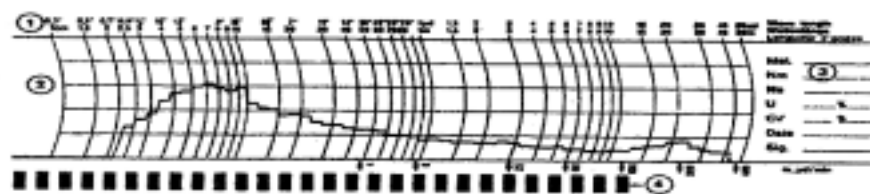
< 4.4> =

:

- 가 ,
- .
- , .
- , 가 .

4.2

, USTER TESTER I 54 , USTER
 TESTER 55 . 15% $1 : 5\sqrt{2}$,
 . USTER
 TESTER 55
 1cm 40m 가
 (4.5).



< 4.5> ()

가

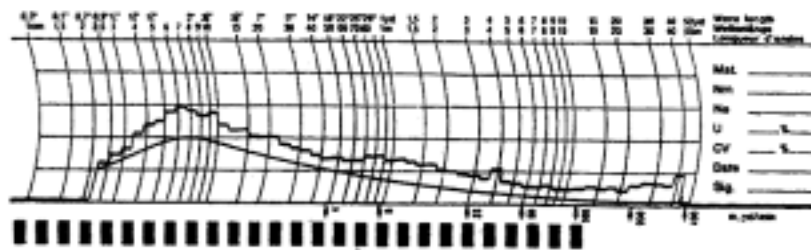
(ideal spectrum)

(normal spectrum) . 2.7

()

< 4.6> (Nm 50)

1.3 .



< 4.6>

가 ,

(4.7), (U%)

(CV%) “0” , zero-

,

가 가

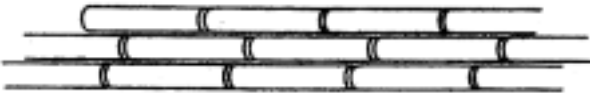
() ,

가 ,

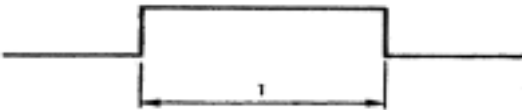
.

< 4.8> “ ” , l

“0”



< 4.7>



< 4.8>

“ ”

.

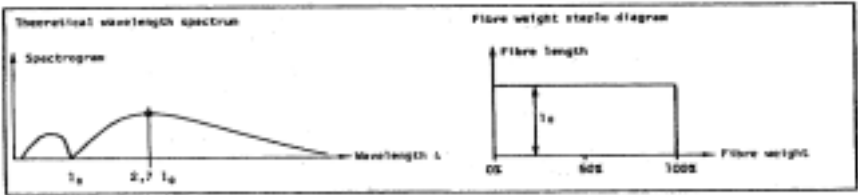
$2.7l_0$ (4.9) , l_0

“0” ,

:

$$S = f(\lambda) = \frac{1}{\sqrt{\pi \cdot n}} \cdot \sin \frac{\frac{\pi \cdot l_0}{\lambda}}{\sqrt{\frac{\pi \cdot l_0}{\lambda}}}$$

, S = , n = , $l_0 =$, $\lambda =$

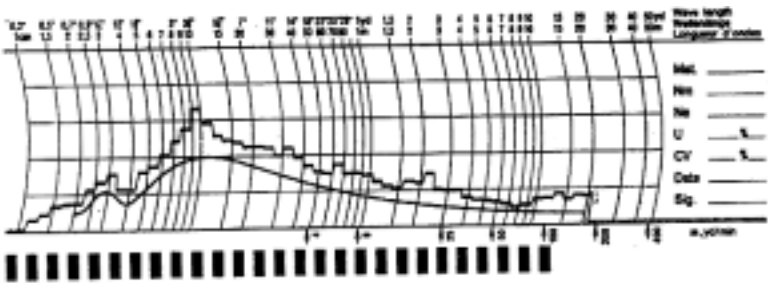


< 4.9> ,

가 ,

l_0 가 “0”

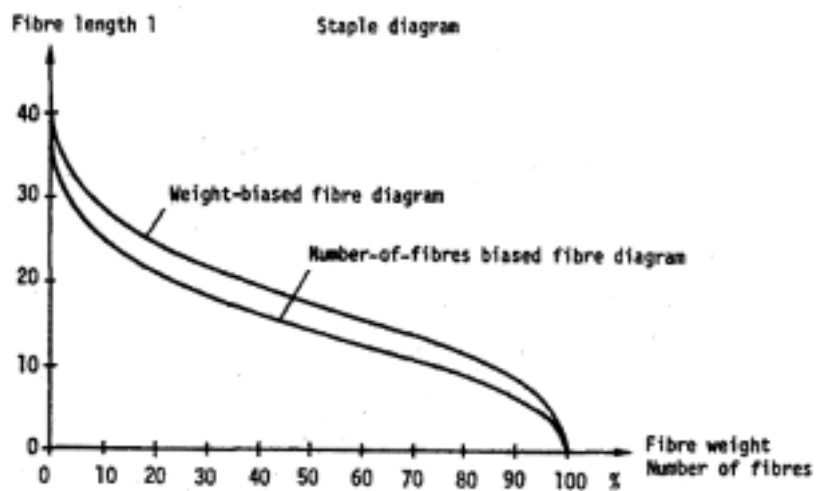
< 4.10> (l_0) 40mm 100%



< 4.10> 100%

< 4.10>

< 4.11> ,



< 4.11> ()

	$\overline{l_w} > \overline{l_n}$	$\overline{l_w}$
	+15%	22mm
	+5%	25mm
	+15%	50mm

, $\overline{l_w} =$, $\overline{l_n} =$

, $(\overline{l_w})$

(4.12):

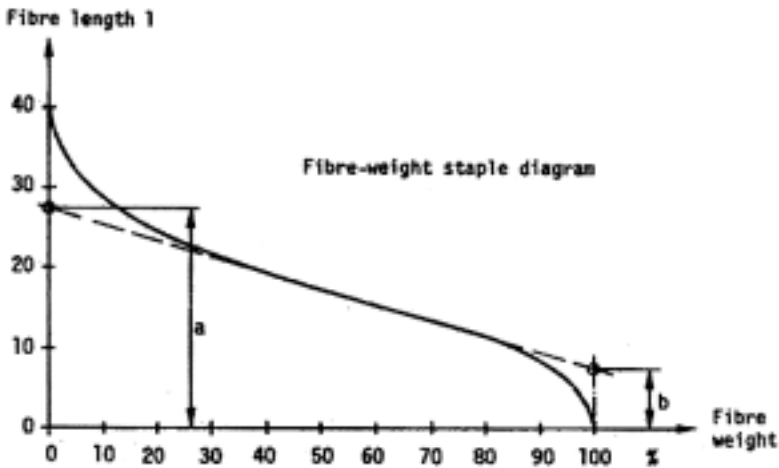
- .

- 0% 100%

a b ,

- $(\overline{l_w})$:

$$\overline{l}_w = \sqrt{\frac{a^2 + b^2}{2}}$$



< 4.12>

$2.82 \overline{l}_w$ 가

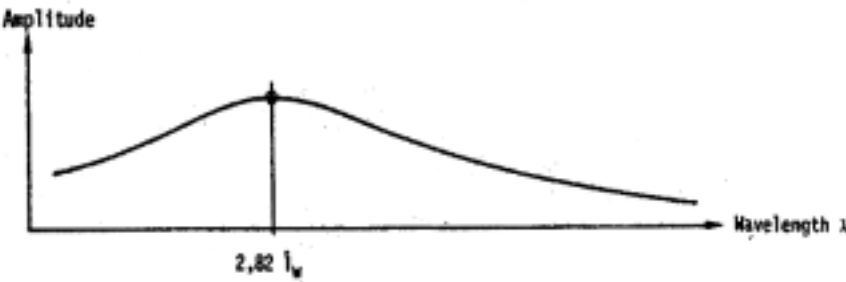
(4.13). < 4.9> $\overline{l}_0$

.

(,)

,

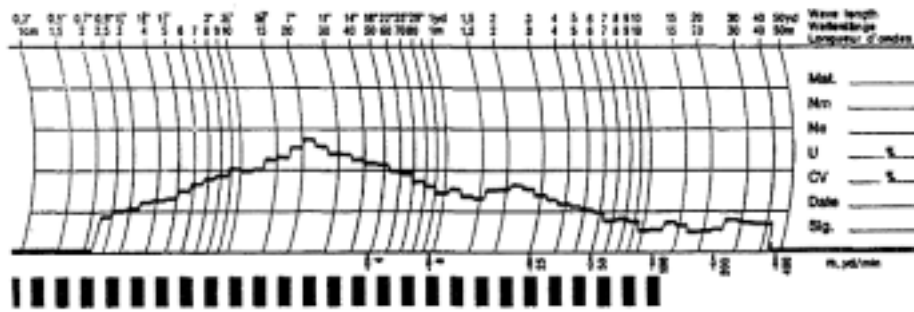
.



< 4.13>

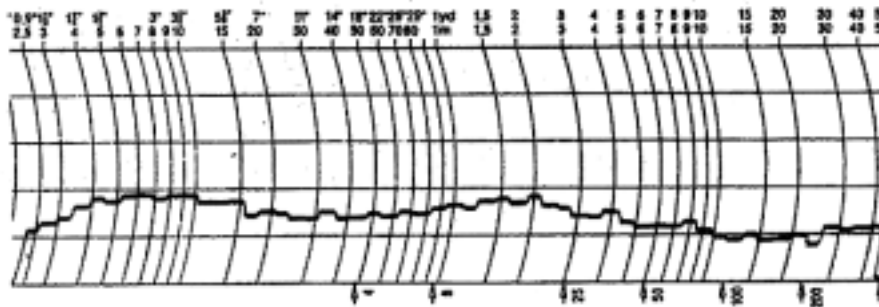
< 4.5> <

4.14>



< 4.14>

(4.15).



< 4.15>

(66, dtex22 f7)

4.3

λ

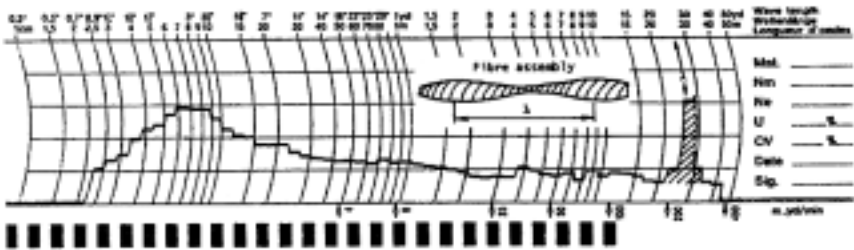
λ

가

가

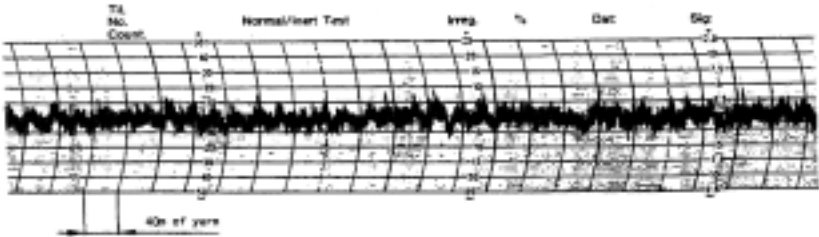
,

28m (4.16).

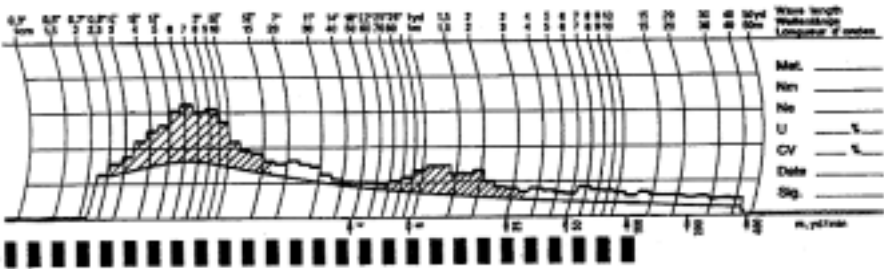


< 4.16> (λ =28m)

< 4.17>



< 4.17>



< 4.18> 가

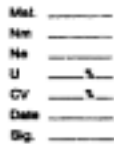
,

가

가

가 (4.18),

,



,

•

•

)

•

,

 $(,$ $(\overline{l_w}) \quad 2.2\text{cm} \quad)$

—

 $(\lambda_{v1}) :$

$$\lambda_{v1} = 2.75 \times \overline{l_w} = 2.75 \times 2.2 \quad 6\text{cm}$$

- (λ_{v2}) :

$$\lambda_{v2} = 3.5 \times 2.2 \times 23.5 \quad 180\text{cm} \quad 1.8\text{m}$$

가 가 <

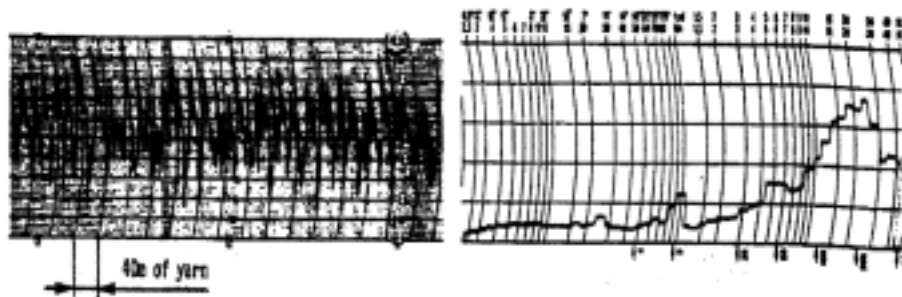
4.18> , 가 < 4.19> .

< 4.20> (POY, dtex 130 f24)

,

4~50m

(anti-patterning) -가



< 4.20> (POY)

가

,

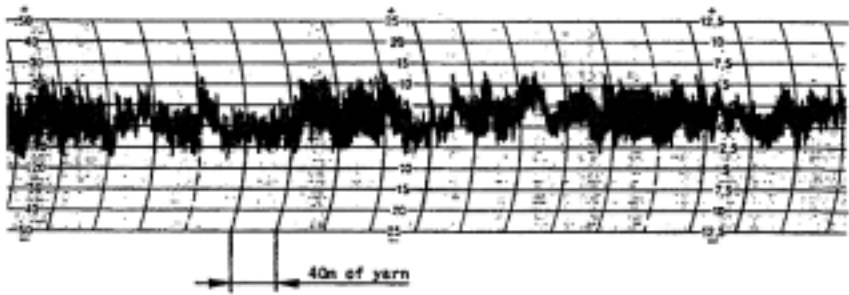
.

가

<

4.21> (dtex 680)

, 가 .



< 4.21>

4.4 .

.

가 .

< 4.22>

.



< 4.22>

가 , 가
(cloudiness)

， (λ)

，

：

(λ = 1~50cm) : 1~50cm

， 가

가 , < 4.22>

가 . 50cm~1m

．

(λ = 50cm~5m) : 50cm~5m

． ， ，

가

가

， 가 ．

가

．

(λ=5m) : 5m

(cross-

stripe) ．

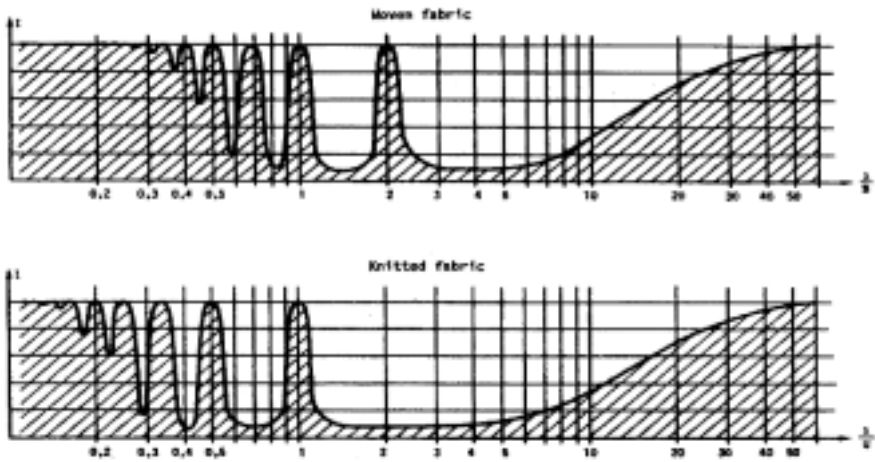
． 1m

． < 4.23>

．

U% CV%

가 . < 4.24>

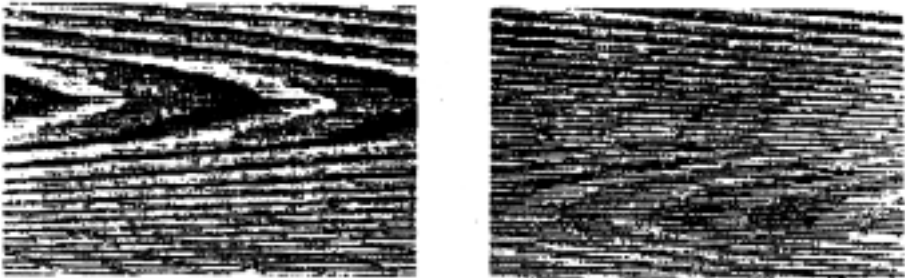


< 4.23> ,

/

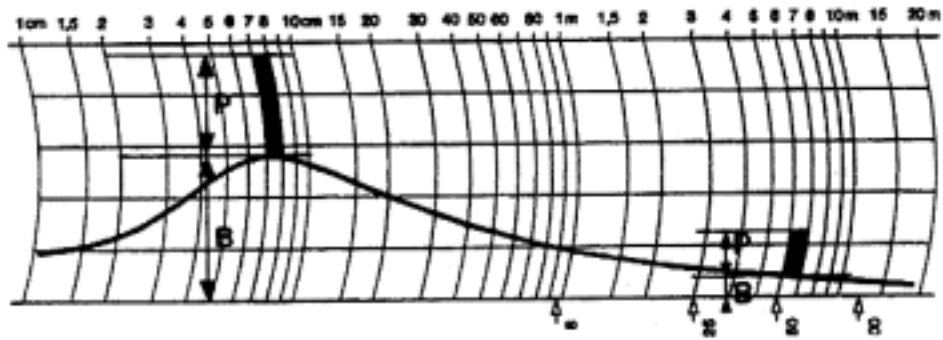
, I = / , λ = , B = ,

U =



< 4.24>

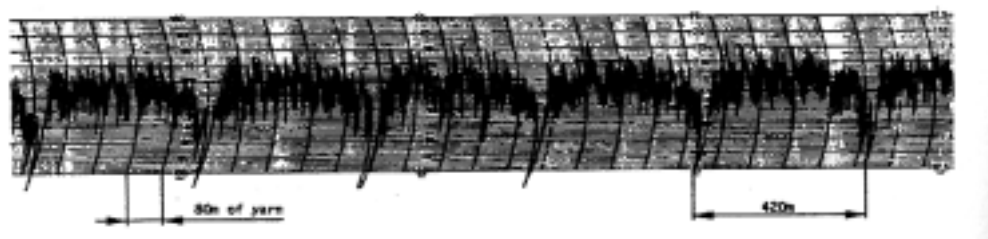
, , , ,
 , (up-take) .
 < 4.25> 가
 가 50% (, $P >$
 $B > 0.5$), .



< 4.25> (P) (B)

1cm~40m
 . 40m
 . U% CV% 가
 , .
 , -가
 ,

< 4.26> (dtex55 f24)
 420m .



< 4.26>