

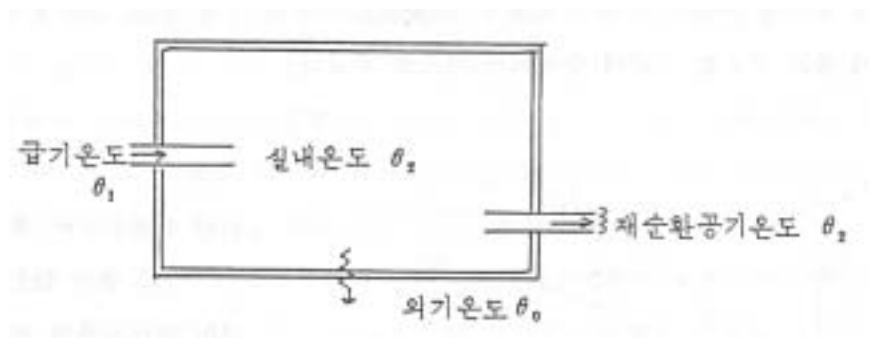
(2)

2. (動特性)

， ， ，
< 3> θ_1
가
 θ_2 θ_1 가 가
 θ_1
가 가

1
가 가
가 가
가

가
(上記)



< 3>

< 3>

가

가

θ_{21} . (收受)

$$VCpr(\theta_1 - \theta_{21}) = AU(\theta_{21} - \theta_0) \text{----- (1)}$$

$$, \theta_{21} - \theta_2 = \frac{VCpr(\theta_1 - \theta_0)}{VCpr + AU} \text{----- (2)}$$

V : (給氣風量) (m³/h)

Cp : (比熱) (kcal/kg)

r : (kg/m³)

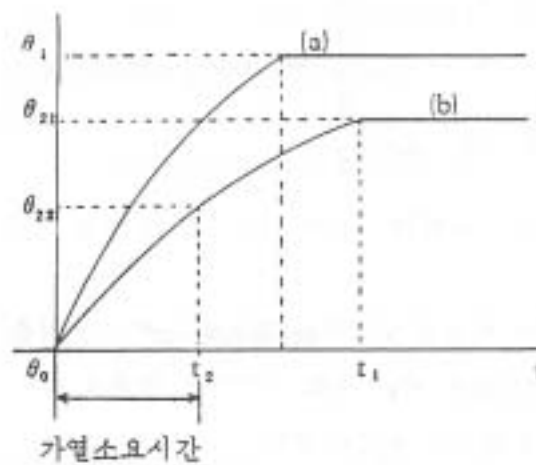
θ_1 : ()

θ_0 : ()

θ_{21} : ()

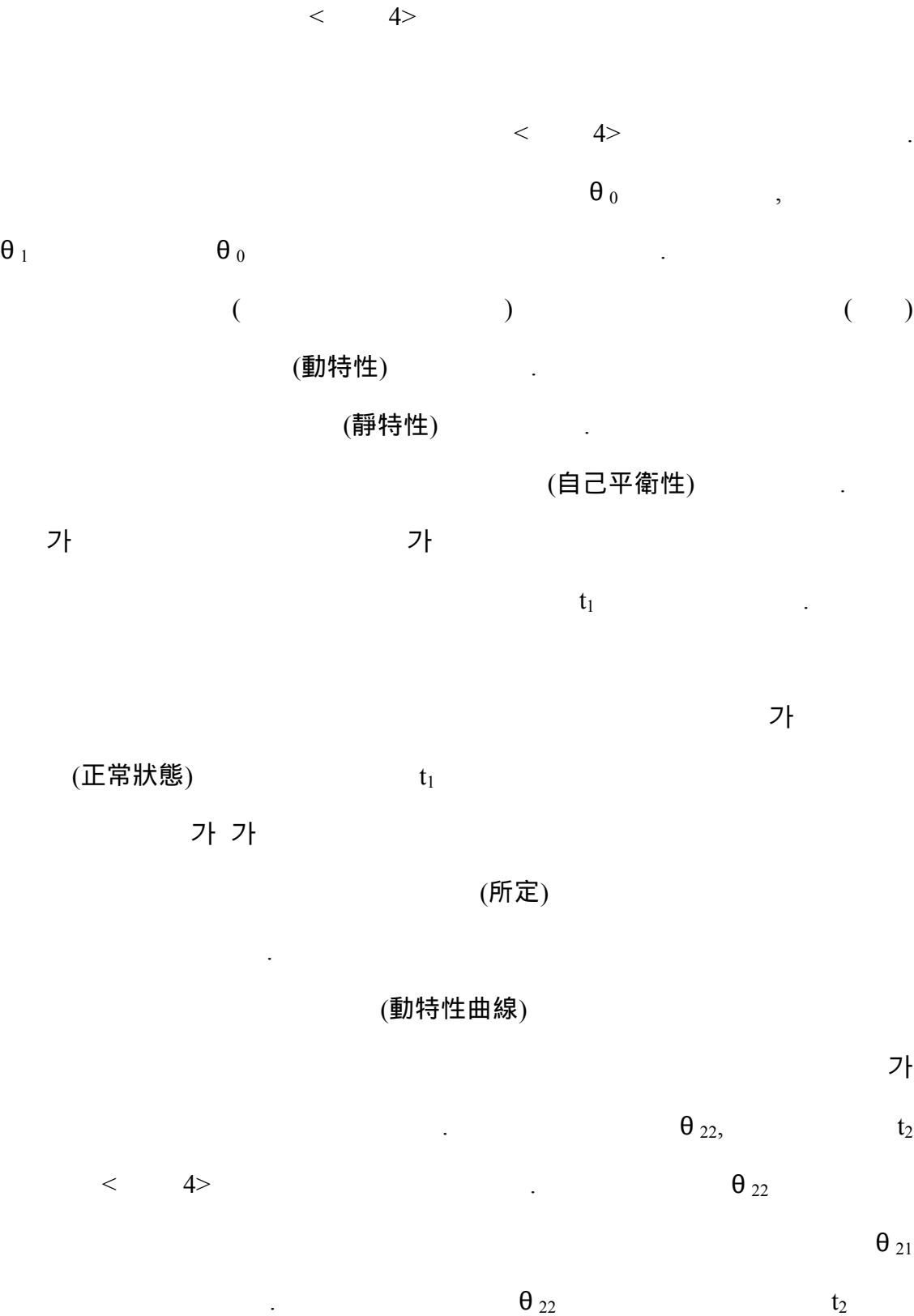
A : (m²)

U : (kcal/h m²)



(a)

(b)



θ_1

가

θ_0

$\theta_{1,}$

θ_{21}

θ_1'

, θ_{21}' 가 θ_{21} (2) θ_1 θ_1'

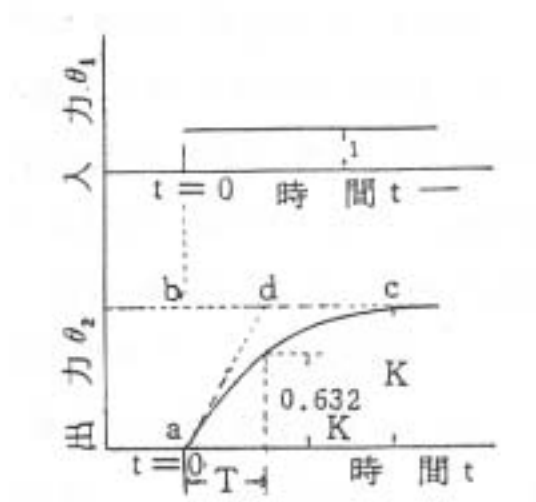
θ_{21} θ_{21}' ,

$$\theta_{21}' - \theta_1 = \frac{VCpr(\theta_1' - \theta_0)}{VCpr + AU} \text{-----(3)}$$

$$\theta_{21}' - \theta_{21} = \frac{VCpr(\theta_1' - \theta_0)}{VCpr + AU} \text{-----(4)}$$

,

(靜特性)(平衡)) 가



< 5> Initial Response

(動特性)

가? (前例)

(負荷)

(單位量)

initial response ()

< 5>

C(kcal/deg)

$$C \frac{d\theta_2}{dt} = VC_{pr}(\theta_1 - \theta_2) - UA(\theta_2 - \theta_0) \text{-----}(5)$$

t (h) . < 5> θ_1 t = 0 0

t>0 1 , $\theta_0 = 0, t = 0$ $\theta_2 = 0$,

$$\theta_2 = \frac{VC_{pr}}{VC_{pr} + UA} \left(1 - e^{-\frac{VC_{pr} + UA}{C}t}\right)$$

$$= K \left(1 - e^{-\frac{t}{T}}\right)$$

$$, K = \frac{VC_{pr}}{VC_{pr} + UA}$$

$$K = \frac{C}{VC_{pr} + UA} \text{-----}(6)$$

K 가

, (靜特性) t , T .

$e^{-\frac{t}{T}}$ t = 0 1 t가 t가

0 .

θ_2 $t = 0$ 0 K
가 . 가

< 5> abc .
ac .

$t = 0$ (平衡
值) K T . T (時定
數)(time constant) . 0.632 K .

K, T
가 .

，
(時定數) ， (近似的)

2
.

< 3> θ_1
< 7> 가 가

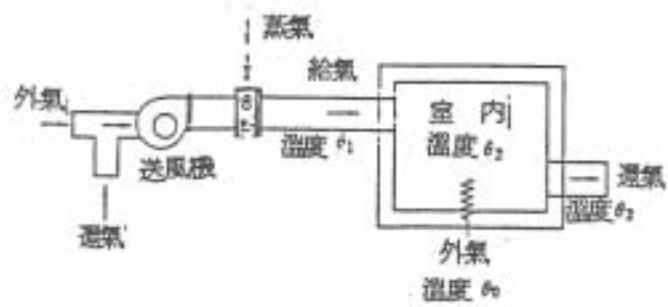
.
가

가 . θ_1 θ_0
.
 θ_1

< 6> .
， 가

，
(前述)

()

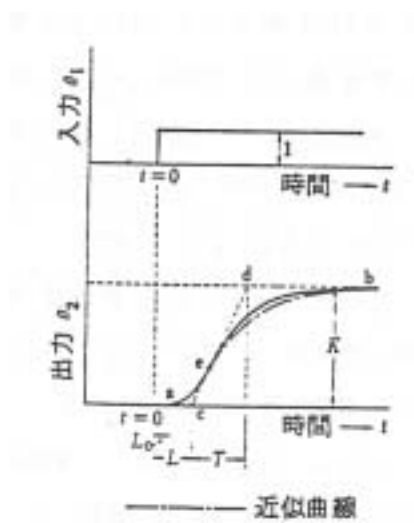


< 7>

가 가 ,
가
가

. < 7>

< 8> a e b



< 8> Initial Response

$\langle 5 \ 6 \rangle$ (變曲點)
 가 . $\langle 8 \rangle$ a가 t = 0
 . , L_0 (無用時間) . a e b
 $\langle 6 \rangle$
 . , c b가 , a e b e
 c e d , c , c e d

(5)
 L 가 (等價無用時間), (時定
 數) T 가 (等價時定數)
 가 .

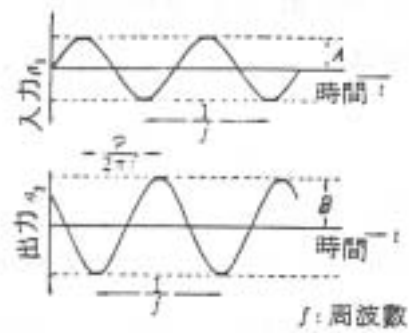
$$\theta_2 = K(1 - e^{-\frac{t-L}{T}}) \text{-----}(7)$$

(定量的)
 (時定數)
 가
 (時定數)
 , , , (吸濕量)
 , (流量) (水槽) .

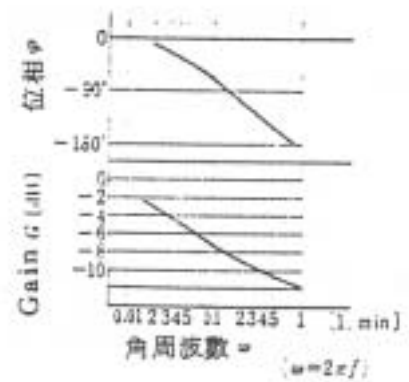
가 .
 (負荷) 가 , 가 ,
 , ,
 가 가 .
 ,

定數) 가 가 가 가
 (外亂) (外亂) (時
 (無用時間) . . .
 가 가

(曲)(sin
 (正弦波狀))



< 9 >



< 10 >

. < 9> .
 (B/A=G) Gain, (入力疲) (出力疲) (位相角) ψ
 (位相) , Gain (G)
 (位相)(ψ) ,
 < 9> (角周疲數) , Gain
 (對數量) (位相) .
 ,
 (位相) .

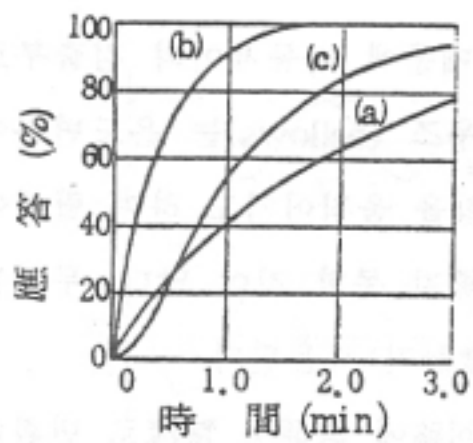
3. (檢出部)

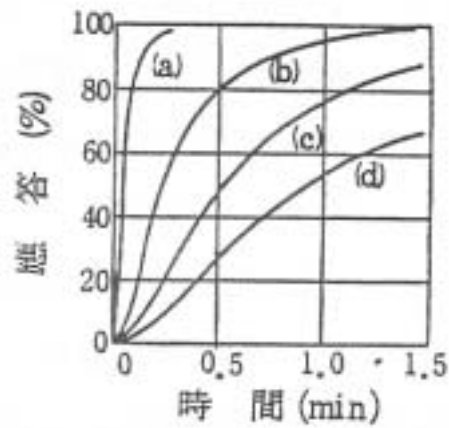
, ,
 , ,
 .
 ,
 .
 (bellows)
 가 가
 가
 가
 가
 (bridge)

, , (가
), , 가
 ((木片),) , ((
), U , , , ,
 , ,
 , , ,
 Gain
 가 가 ,
 (動特性)

가

< 11>





(a) (裸)

(b) 4.6m/s (裸)

(c) 4.6m/s sus (保護管付)

65 (a) (裸), (b) ,

(c) sus , (d) sus (軟鋼外管付))

< 11>

,

.

, < 9>

< 12> ,

.

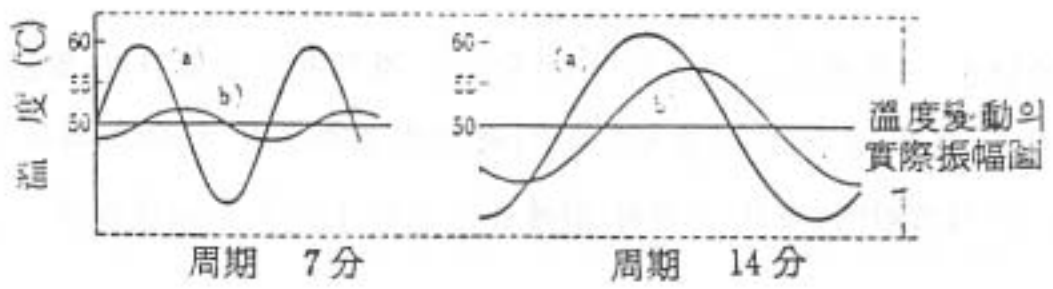
< 12> ,

가 (1 가

) 가 가 (負荷)

가 가

.



(a), (b)

< 12 >

가

가

가