

(4)

5.

， ， ， ，
， 가
.
.
(操作端) ， 가 ，
， ，
.
(複座二方) ， (單座二方) ， (三方)
가 (複座二方)
(流量)
(單座二方)
가 (三方)
가
close-off rating
(單座二方) (三方)
closs off rating
(流量)
range ability
30:1~50:1 ， 50:1

(全開時) (流量) 1/50

(耐壓), (耐蝕)

가 (開度),

(開度)

(開度)

(全閉) 0, (全開) 100 (流量)

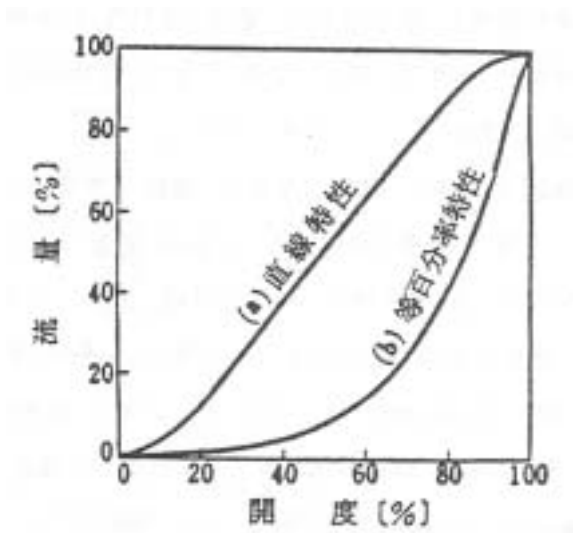
(現在市販)

on-off (quick opening), (Linear), (等)

(equal percentage) 3 가

on-off 가 0

2



< 32 >

(開度) (完全比例)

< 32> (全開), (全閉時)

(等) (開度變化)(S) (V)가 (V)

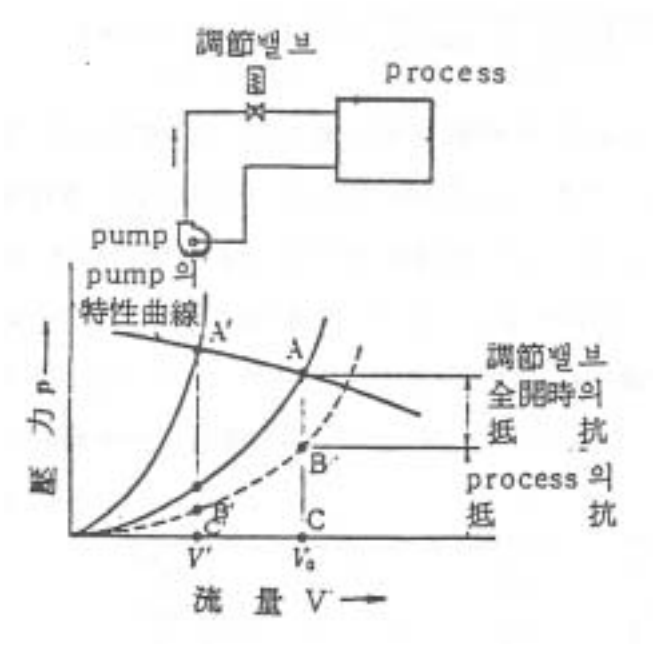
$\frac{\Delta V}{V}$ S = (圖示) < 33> (b)

(比例制御)

가

(動特性), (靜特性),

(外亂) , (最適制御) (開閉)

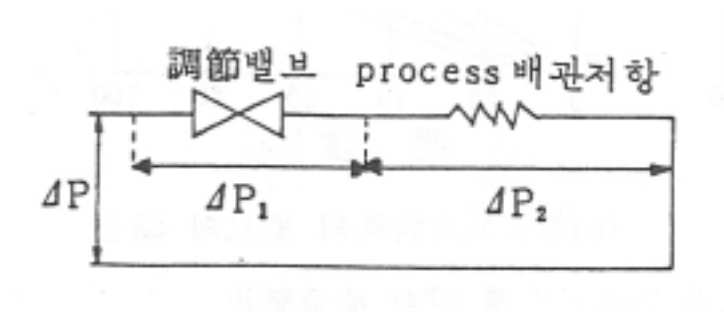


< 33> (全裝置) (流量)-

(流量特性)

< 33> ()

(全開時) V_0 <
 33> A AB, process
 BC . (V' A'B',
 B'C' , AB
 A'B' P = <
 34>



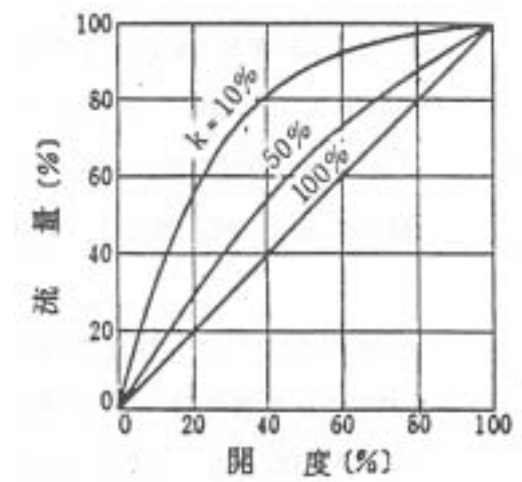
< 34>

$V,$ $P,$ $K_1,$
 $P_1,$ process $K_2,$ P_2
 $V = K_1 \sqrt{\Delta P_1} = K_2 \sqrt{\Delta P_2}$
 $P = P_1 + P_2$ ----- (17)
 (開度) K_1 , ,

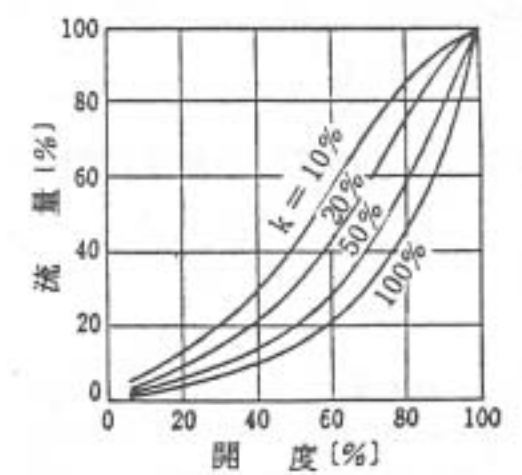
(全開) V, K_1, P_1

$V_{\max}, K_{1\max}, P_{1\max}$. P_1 , $P_{1\max} / P = K$

$$\frac{V}{V_{\max}} = K_1 / K_{1\max} \sqrt{K + (1-K)(K_1/K_{1\max})^2} \text{-----(18)}$$



(a) (場合)



(b) (等) (場合)

< 35 > (裝置抵抗)

$$K_1 / K_{1max} \qquad K$$

(圖示) < 35> (a) ,

가 (全開時)

가 50%

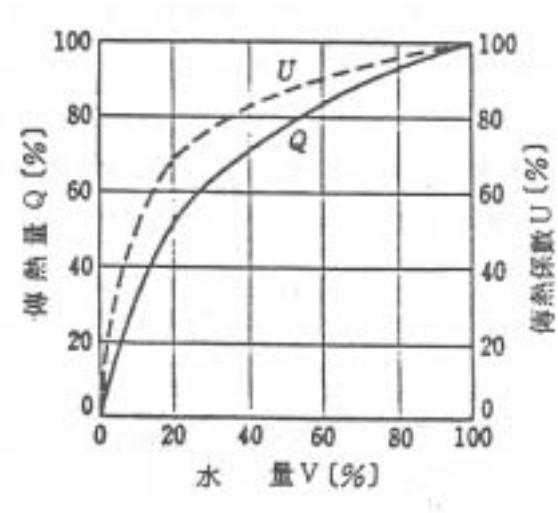
(等)

$$K_1 / K_{1max} = r^{\sigma-1} \text{-----(19)}$$

, σ : (開口比), r : range ability .

(圖示) < 35> (b)

K가 가



< 36> (能力變化比例)

가 < 36>

(等) < 35> (b)

, K = 50% 가 가

(流量計數)

가 1psi(0.07 kg/cm2) 60 (15.6)

1gal/min(3.791/min) (流量計數)

Cv

$$C_v = 1.17V \frac{\sqrt{G}}{\sqrt{\Delta P}} \text{-----}(20)$$

, Cv : , V : (m³/h), G : , P : (Kg/cm²)

(流入絶對壓力) 1/2

$$C_v = \frac{WK}{13.67\sqrt{\Delta P(P_1 + P_2)}} \text{가 } 1/2$$

$$C_v = \frac{WK}{11.9P_1}$$

, Cv : , W : (kg/h), P₁ : (Kg/cm² abs), P :

(Kg/cm²), K = 1 + 0.0013 x ()

Cv

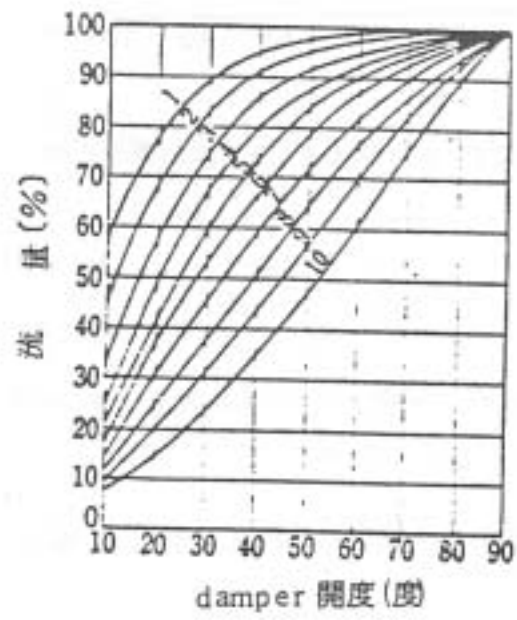
P

20% (25%

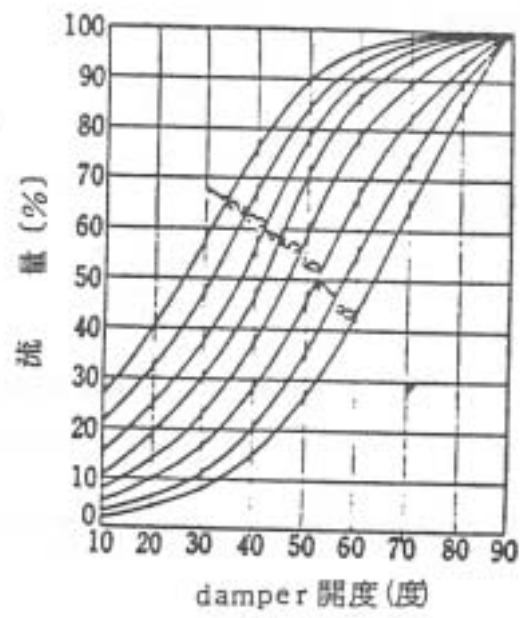
), 33~70%(50~240%)

P가 가

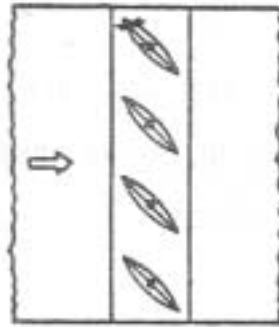
, 가



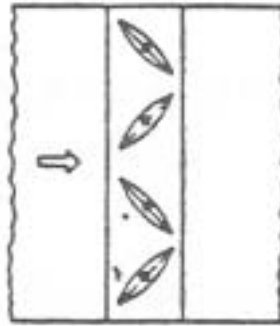
(a)



(b)



(a)



(b)

< 37 >

(平行形) (a)		(對向形) (b)	
(全開) (全裝置低抗內) %	(流量特性)	(全開) (全裝置低抗內) %	(流量特性)
0.5~1.0	1	0.25~0.50	1
1.0~1.5	2	0.50~0.75	2
1.5~2.5	3	0.75~1.5	3
2.5~3.5	4	1.5~2.5	4
3.5~5.5	5	2.5~5.5	5
5.5~9.0	6	5.5~13.5	6
9.0~15.0	7	13.5~25.5	7
15.0~20.0	8	25.5~37.5	8

20.0~30.0	9		
30.0~50.0	10		

< 38>

< 37> (a), (b)

< 38>

(對向流形)