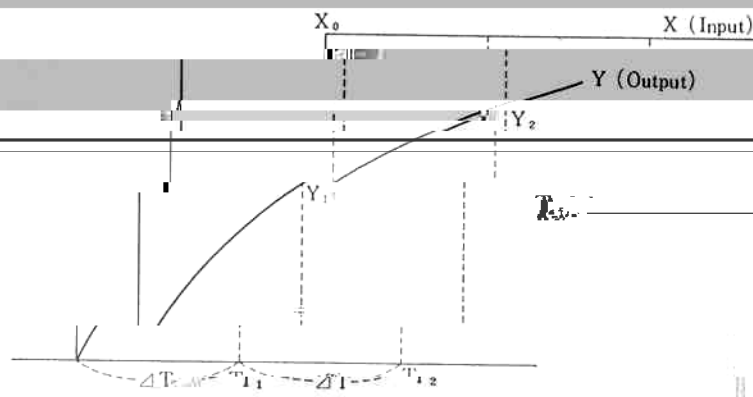
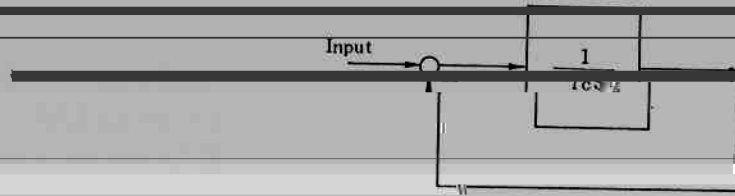


# 1 次, 遅れの計算法

菅 田 昌  
[Redacted]

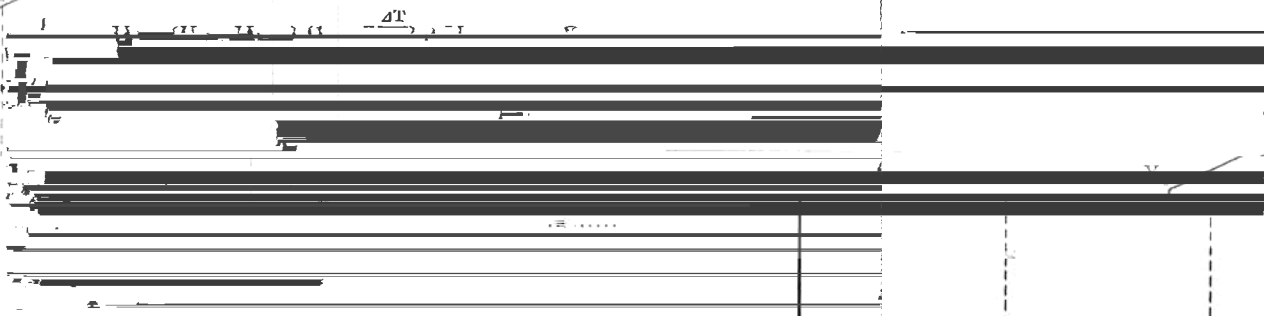
The Method of Calculation of First-Order Lag



There are many methods for the calculation of first-order lag.



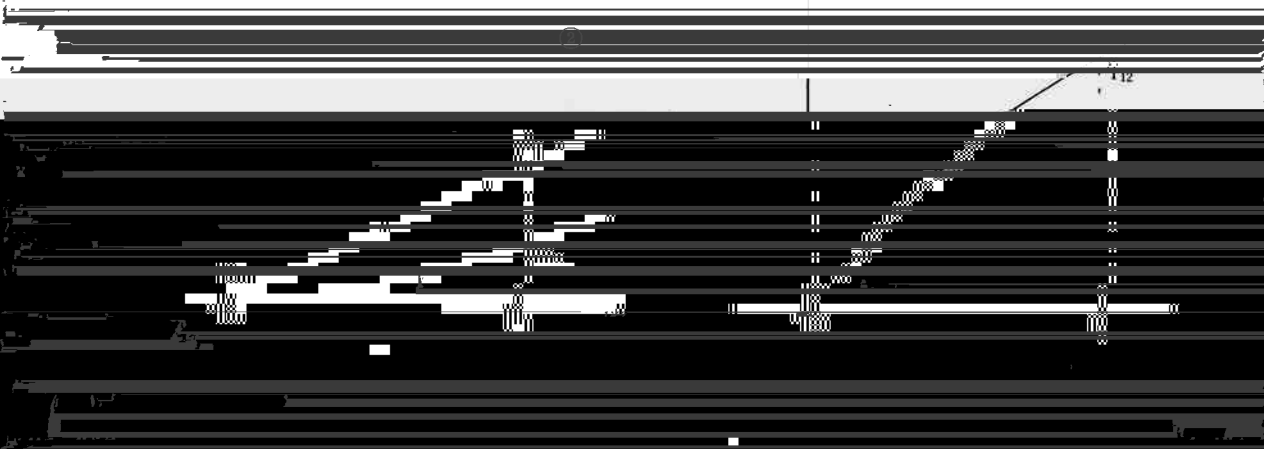
$T = T_n$  のとき



〔2〕 ランプ入力に対する出力



$T = T_r$  のとき



$$T = T_1 \text{ のとき}$$

$$A_{n+1} = (\lambda_n - \lambda_{n+1})A$$

$$Y_1 = \frac{1}{L} \int_0^T (1 - e^{-\lambda t}) dt$$

$$Y_n = \frac{1}{L} \int_0^T (X_{n-1} - X_{n-2}) dt$$

$$Y_1 = \frac{1}{L} (1 - e^{-\lambda T})$$

$$Y_1$$

$$Y_n = Y_{n1} + Y_{n2} + Y_{n-1}$$

$T = T_2$  のとき

$$Y_1 = \frac{1}{L} \int_0^{T_2} (1 - e^{-\lambda t}) dt$$

$$Y_n = \frac{1}{L} \int_0^{T_2} (X_{n-1} - X_{n-2}) dt$$

.....⑪

$T = T_2$  のとき

$$Y_1 = \frac{1}{L} \int_0^{T_2} (1 - e^{-\lambda t}) dt$$

$$Y_n = \frac{1}{L} \int_0^{T_2} (X_{n-1} - X_{n-2}) dt$$

.....⑫

無駄時  
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e transient

$X_n$

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m

[REDACTED]

[REDACTED]

(SCC) HELWA VACVE IE

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8.2195 0.176599 8.16

18.0	-0.355248	0.820951	11.97
19.0	0.399800	0.849284	10.70
20.0	-0.266022	0.809628	10.58
21.0	0.277387	0.822287	10.87
22.0	-0.197770	0.799592	11.06
23.0	-0.185591	0.804354	11.24
24.0	-0.183064	0.813020	11.42
25.0	-0.185913	0.821432	11.60

[REDACTED]

[REDACTED]

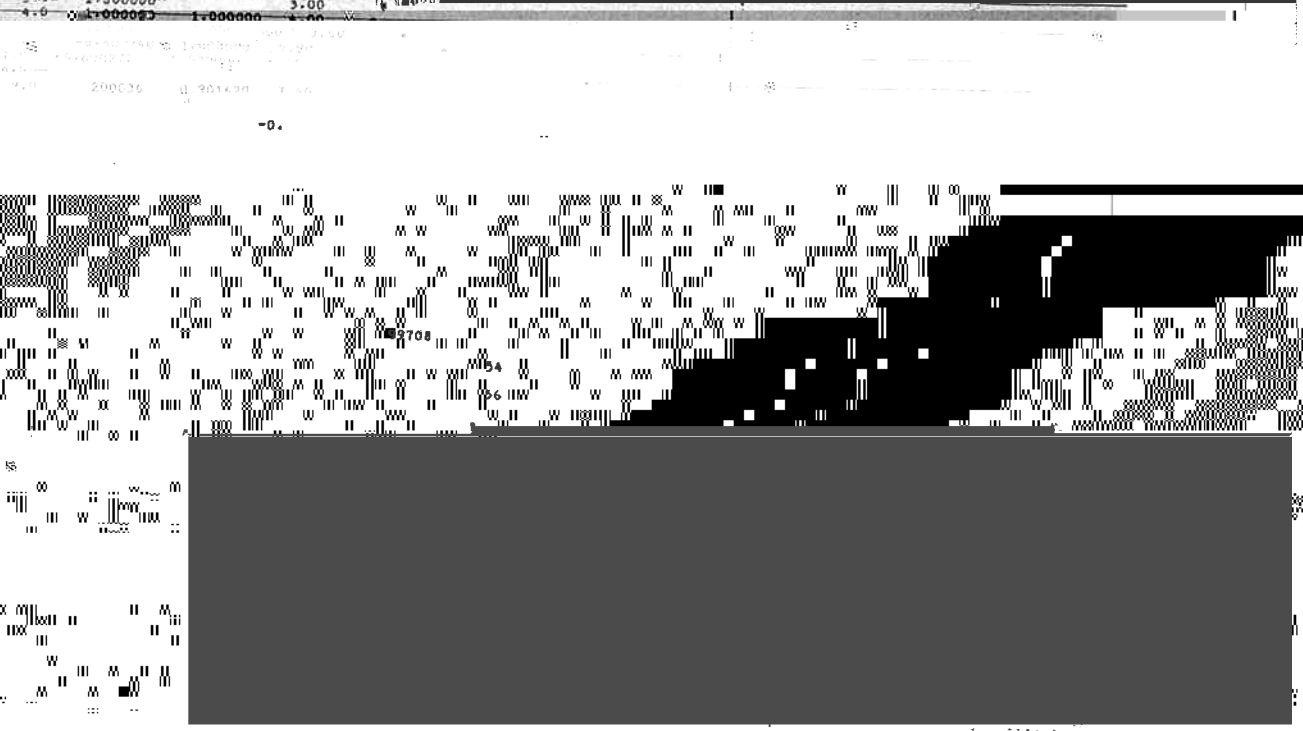
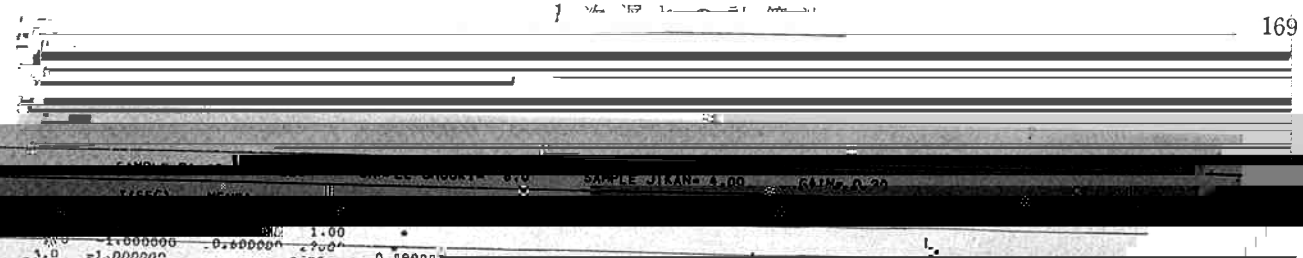
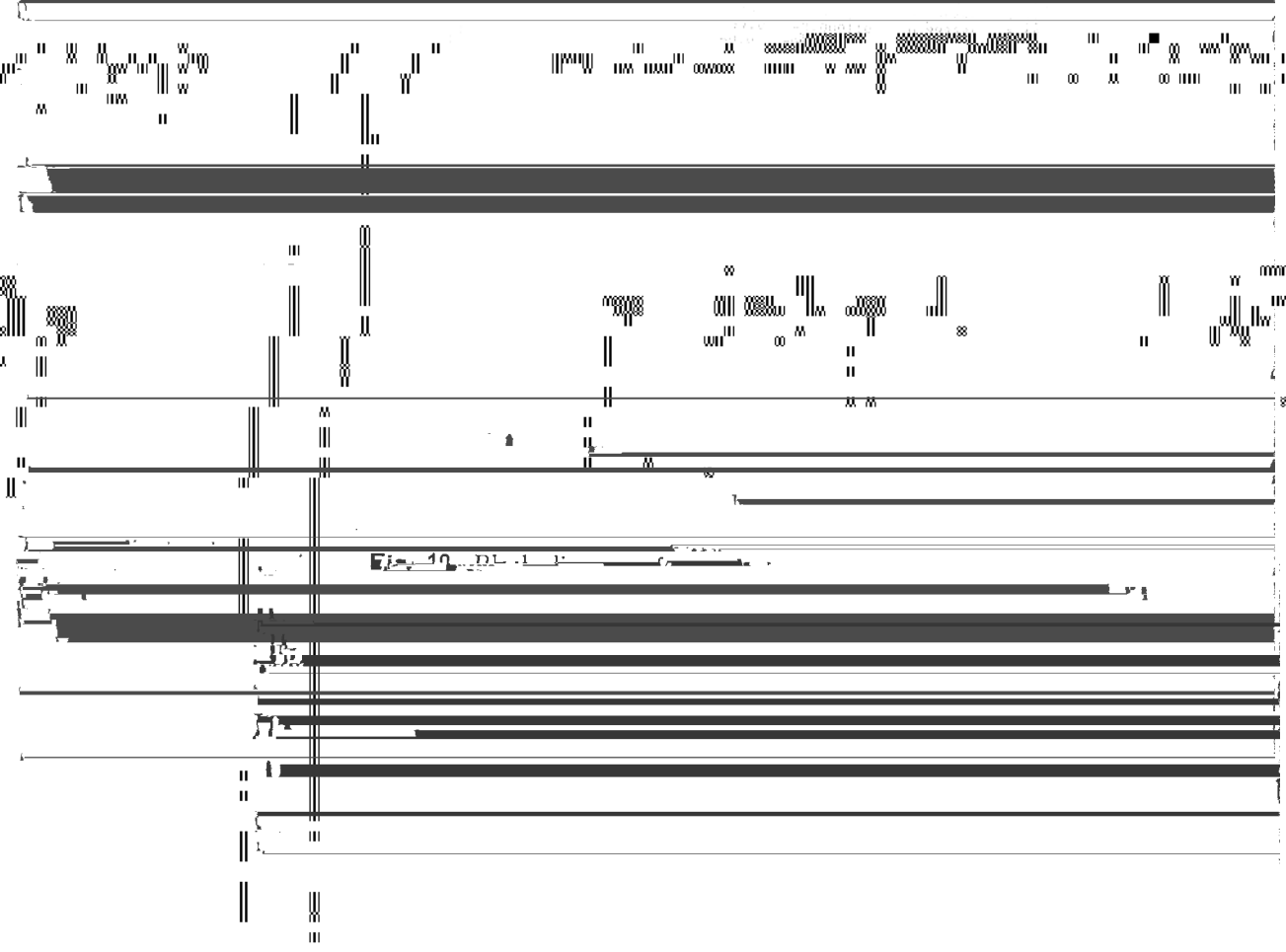


Fig. 9. Transient response of the control system to D.



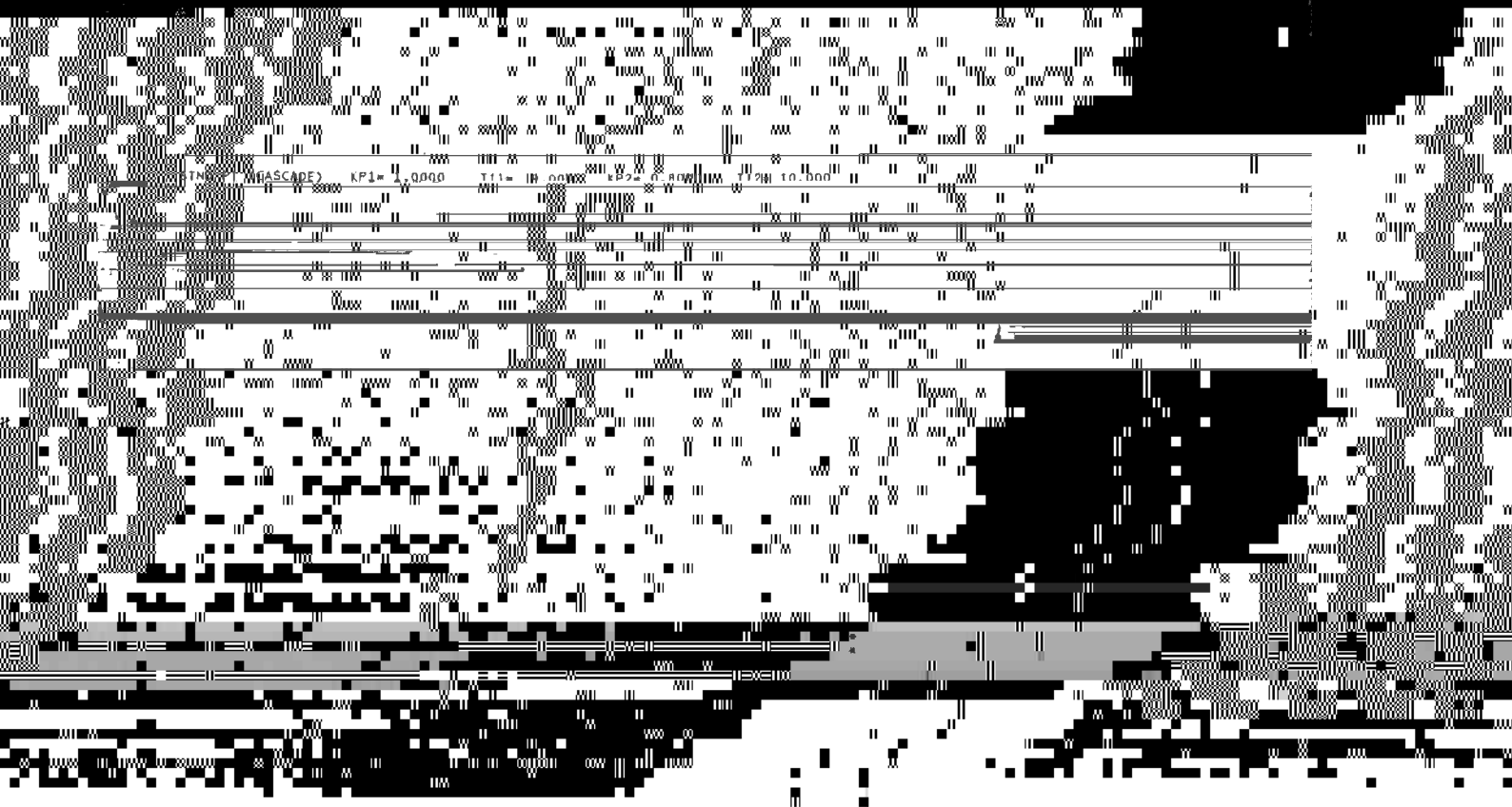
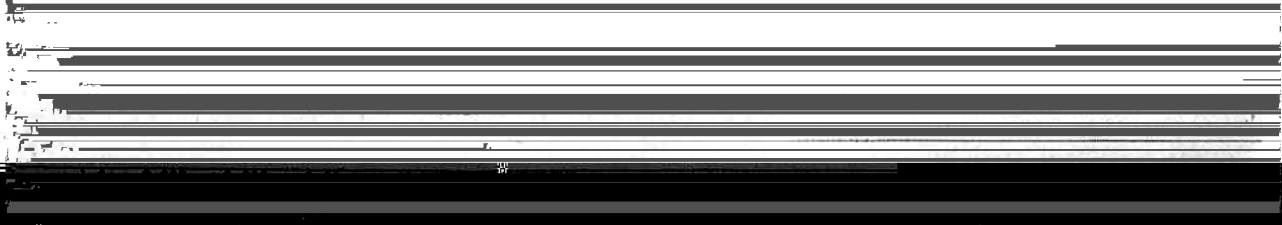


Figure 11: Data visualization showing a grid with various markers and lines.



