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Shaft, Gear

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shaft

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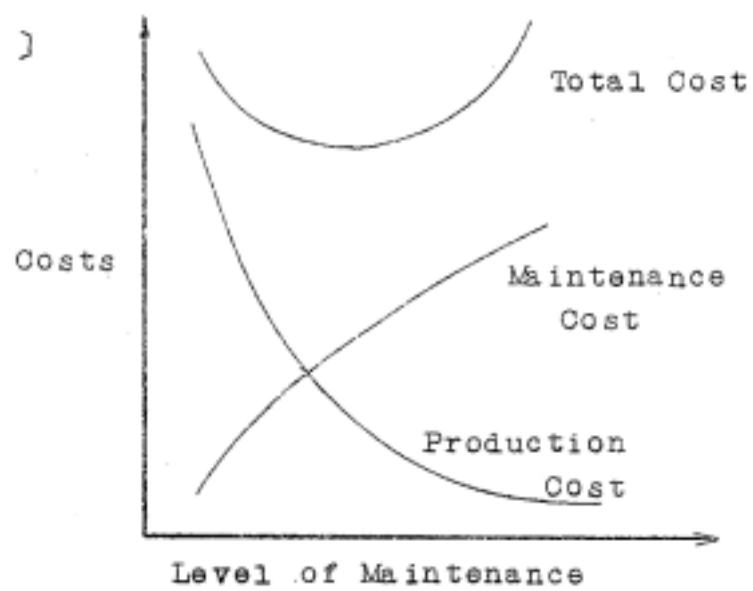
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(1, 2)

(Deterministic Maintenance Policy)

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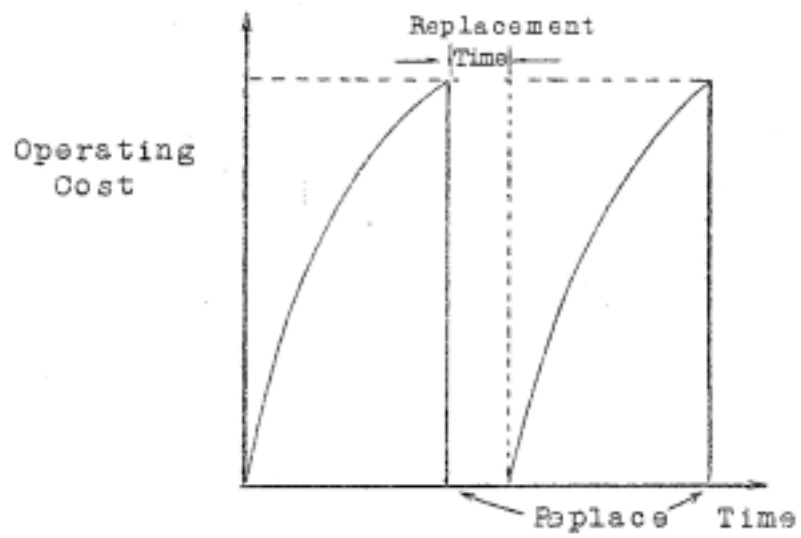
Part

Part

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Part

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< 2> Part

Ring

Front Roller

Drafting

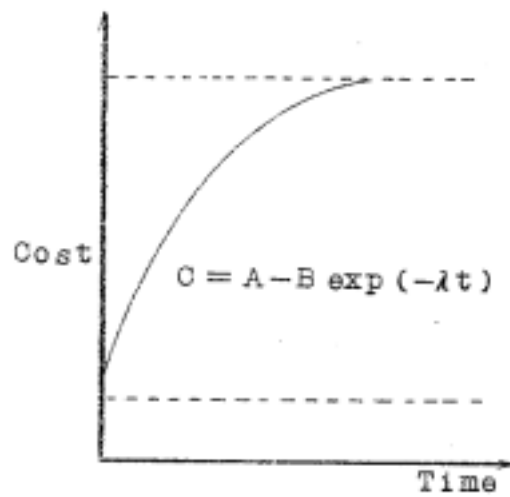
Part

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$$C = A - B \exp(-\lambda t)$$

C, t, A, B, λ



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A- B A 가 .

Part α

. Part p

n ,

$$= \times$$

$$= (n+1) \int_0^p [A - B \exp(-\lambda t) dt]$$

$$C(P)$$

$$C(P) = n\alpha + (n+1) \int_0^p [A - B \exp(-\lambda t) dt]$$

$$= n\alpha + (n+1) \left[Ap + \frac{B}{\lambda} \exp(-\lambda p) - \frac{B}{\lambda} \right]$$

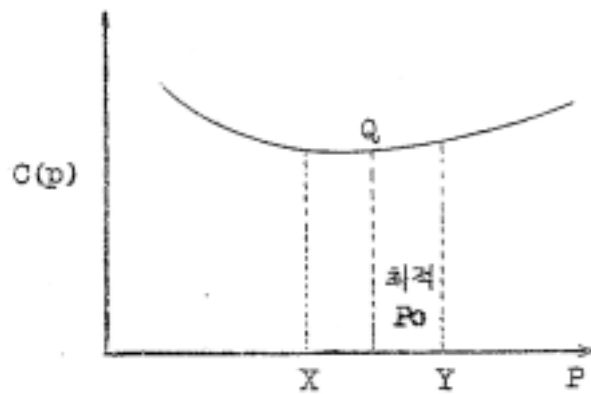
가 T

$$T = (n+1)$$

,

$$C(P) = \frac{T\alpha}{P} - \alpha + TA + \frac{TB}{P\lambda} \exp(-\lambda p) - \frac{TB}{P\lambda}$$

p C(P) Plot < 4>



< 4> -

C(P) Q P , P₀가 .

$$A, B, \lambda, \alpha$$

가가 .

• Q

Q	P	Po	Part
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. Q Po

part .

- 予防保全-

Part가 ,

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予防保全(Preventive

Maintenance) .

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, **가가** .

予

防保全 가 가 , 予防保全

System 가

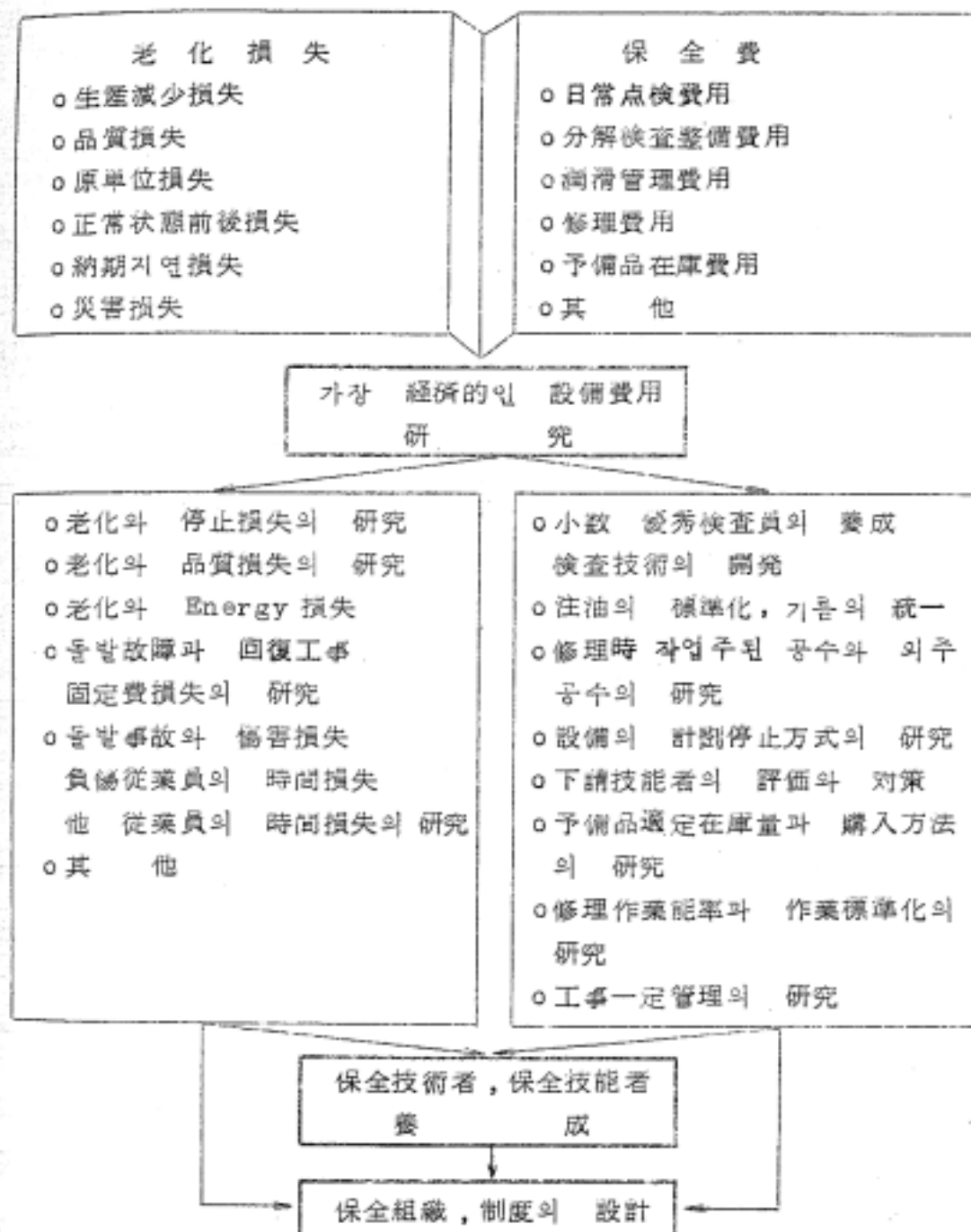
予防保全 < 2>

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予防保全

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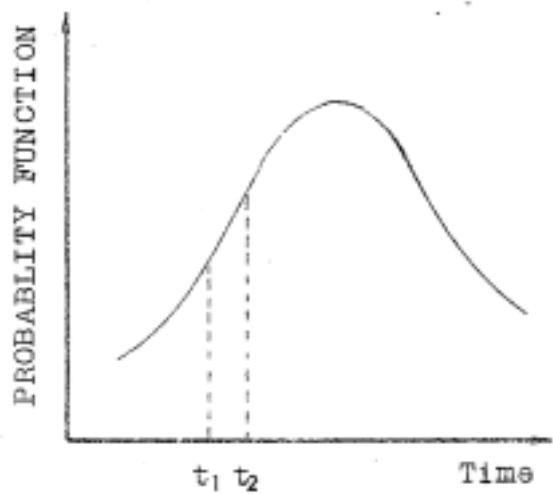
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予防保全 , part가

Part

< 5> (Failure Probability Diagram)



< 5>

t, t2 P(t1 > t > t2)

f(t) .

$$P(t_1 < t < t_2) = \int_{t_1}^{t_2} f(t)dt$$

t1 P(t < t1)

$$P(t < t_1) = \int_0^{t_1} f(t)dt$$

. t1,

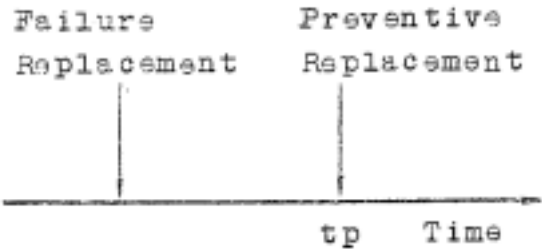
P(t > t1)

$$P(t > t_1) = \int_{t_1}^{\infty} f(t)dt$$

Part

予防的

< 6>



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가 ,

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가 .

, t_p

$$= C_p + C_F \cdot (t_p)$$

$n(t)$

$C(t_p)$

$$C(t_p) = [C_p + C_F \cdot n(t_p)] / t_p$$

가 . t_p 가 , $n(t_p)$

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가 가

가 .