

1.

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2.

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7.

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8.

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- $\frac{U_1}{f_1} = \text{const}$
- $\frac{(U_1)^2}{f_1} = \text{const}$
- $\frac{U_1}{(f_1)^2} = \text{const}$
- $U_1 = \text{const}, f_1 = \text{var}$
- 

9.

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- 10

10.

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11.

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- 2:1
- 10:1
- 100:1
- 1000:1

12.

13.

14.

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15.

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16.

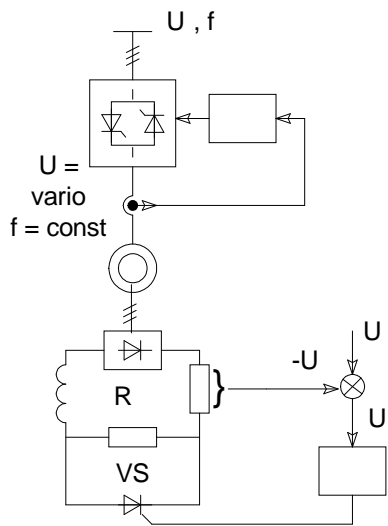
?

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- $1 \div 2$
- $2,4 \div 2,8$
- $2,5 \div 3,5$
- $1 \div 10$
- $1 \div 100$

17.

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18.

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- $\approx F_{\max} \cdot v_{\max}$
- $\approx \frac{F_{\max} \cdot v_{\max}}{k_m} \cdot \eta$
- $\approx \frac{F_{\max} \cdot v_{\max}}{k_m \cdot \eta}$
- $\approx \frac{F \cdot v}{k_m \cdot \eta}$
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19.

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20.

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21.

22.

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$$M - M_c = M$$

$$M = c(\varphi_1 - \varphi_2)$$

$$M = J \frac{d\omega_1}{dt}$$

$$= c \int (\omega_1 - \omega_2) dt$$

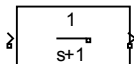
23.

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24.

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Transfer Fcn



Coulomb & Viscous Friction



Dead Zone



Saturation

25.

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**26.**

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**27.**

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**28.**

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**29.**

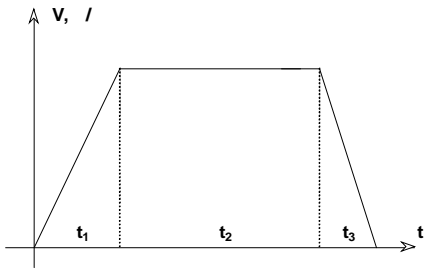
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30.

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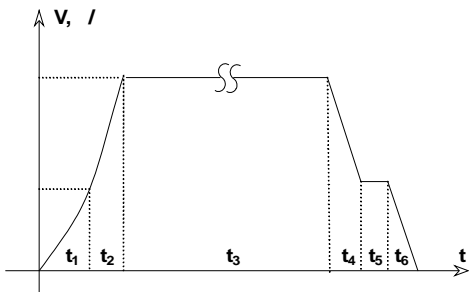
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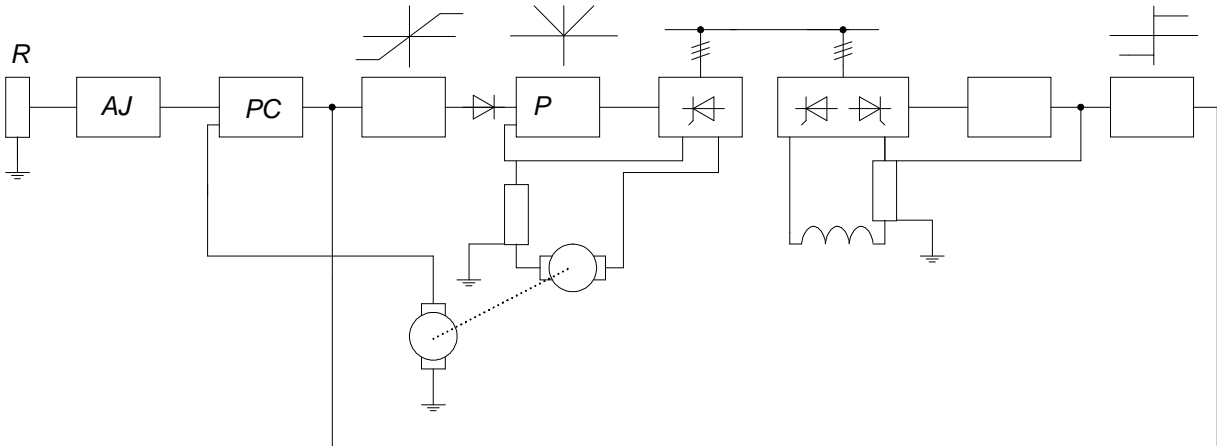
31.

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32.



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33.

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34.

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35.

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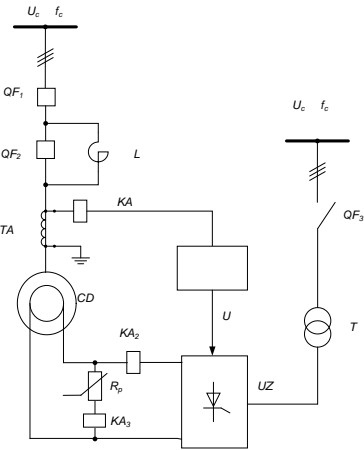
○

○

10...20

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36.



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37.

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- $n = \frac{1000 \cdot v}{\pi \cdot d}$
- $n = \frac{1000 \cdot \pi \cdot d}{v}$
- $n = \frac{1000 \cdot \pi \cdot v}{d}$
- $n = \frac{\pi \cdot d}{1000 \cdot v}$
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**38.**

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**39.**

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**40.**

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**41.**

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- 4 ,5
- F, MTKH
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**42.**

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43.

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44.

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45.

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- ,  $1+ 2 = 180^\circ$
- ,  $1+ 2=180^\circ$
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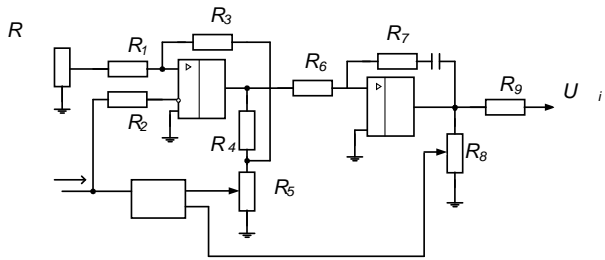
46.

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47.

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48.



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49.

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50.

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