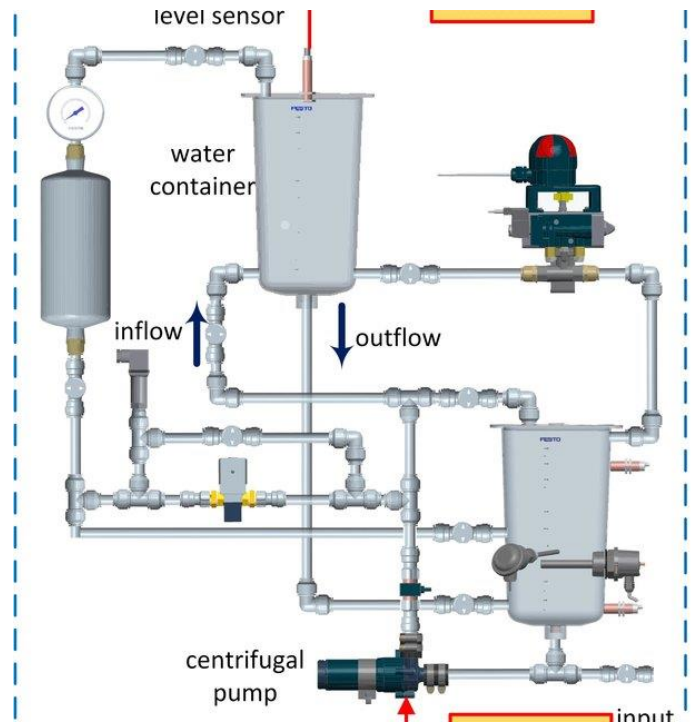
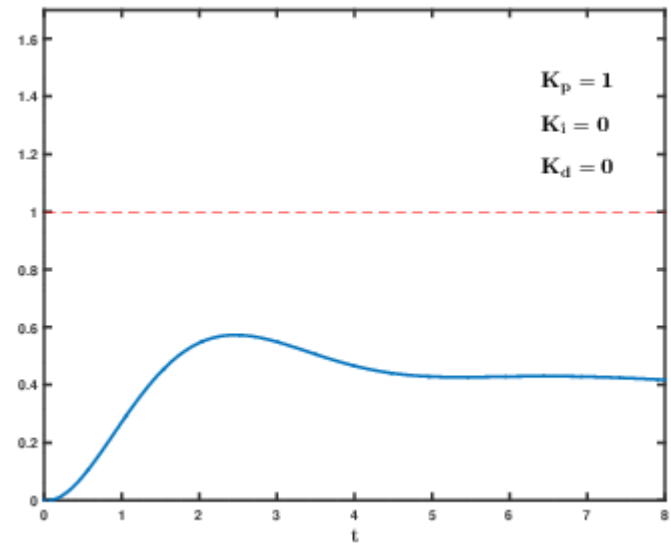
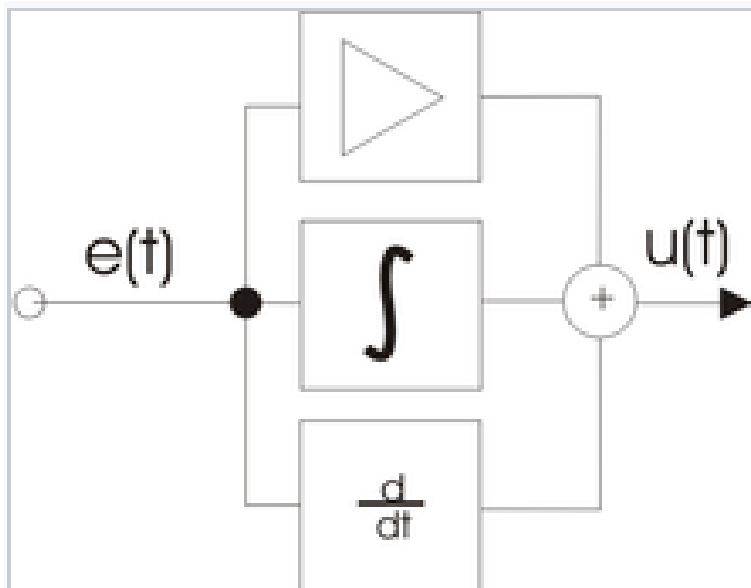


ПИД регулятор в MatLab

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Variant	T_s , sek	K , rad/sek	T_R , sek	T_α , sek
1.	16.0	0.06	1	1
2.	16.2	0.07	2	2
3.	16.4	0.08	1	3
4.	16.6	0.07	2	4
5.	16.8	0.06	1	5
6.	17.0	0.07	2	6
7.	17.2	0.08	1	1
8.	17.4	0.07	2	2
9.	17.6	0.06	1	3
10.	17.8	0.07	2	4
11.	18.0	0.08	1	5
12.	18.2	0.09	2	6
13.	18.4	0.10	1	1
14.	18.6	0.09	2	2
15.	18.8	0.08	1	3
16.	19.0	0.07	2	4
17.	19.2	0.08	1	5
18.	19.4	0.09	2	6
19.	19.6	0.10	1	1
20.	18.2	0.0694	2	6

$$P = \text{tf} (K, [T_s \ 1 \ 0])$$

$$R_0 = \text{tf} (1, [T_R \ 0])$$

$R = \text{feedback} (R_0, 1)$

$$G = P * R$$

step (G)

$$H = \text{tf} (1, [T_{oc} \ 1])$$

$$L = G * H$$

bode (L)

sisotool

File – Import



SISO Design Tool

$$\text{Cpd} = 1 + \text{tf}([\text{T}_s \ 0], [\text{T}_v \ 1])$$

File – Import, Cpd -> C

File – Export >> *Export as, Cpd*>> *C*, >> *Export to workspace* .

$$W = C * G / (1 + C * G * H)$$

$W = \text{minreal}(W)$

$\text{pole}(W)$

$\text{dcgain}(W)$

$W_u = \text{minreal}(C/(1+Cpd*G*H))$

step (W_u)

