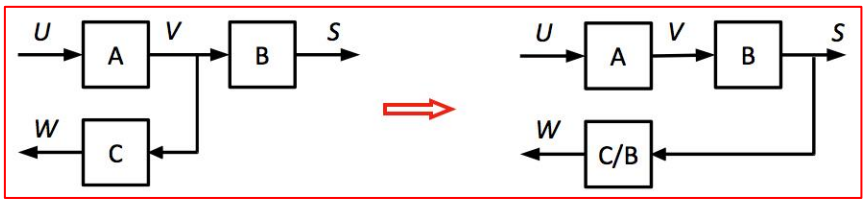
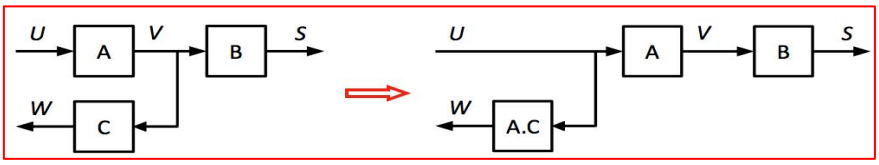
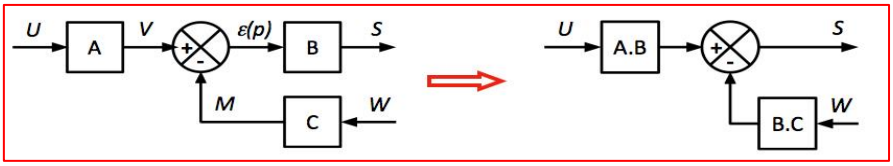
TD – Système de pendulation pour TGV

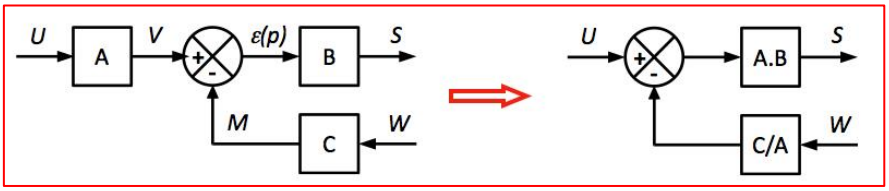
POINT METHODE :

- Déplacement de point de prélèvement (**Q4**) :

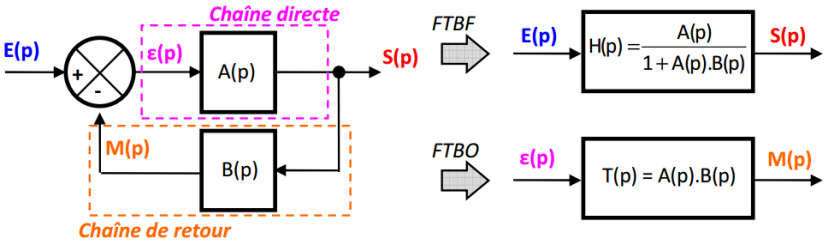






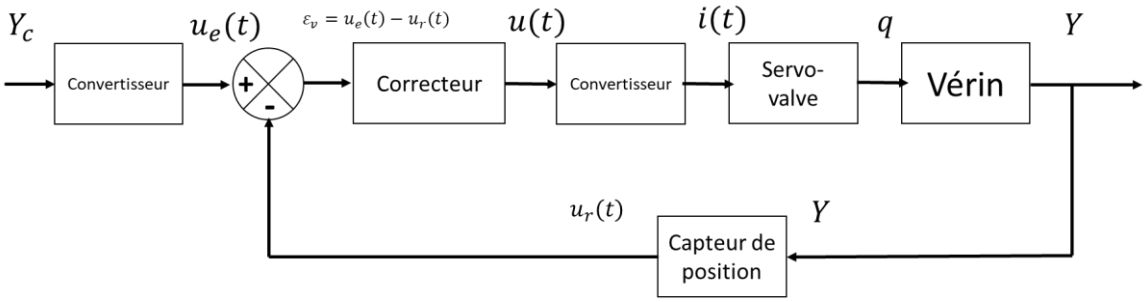


- FTBF (**Q5**) :

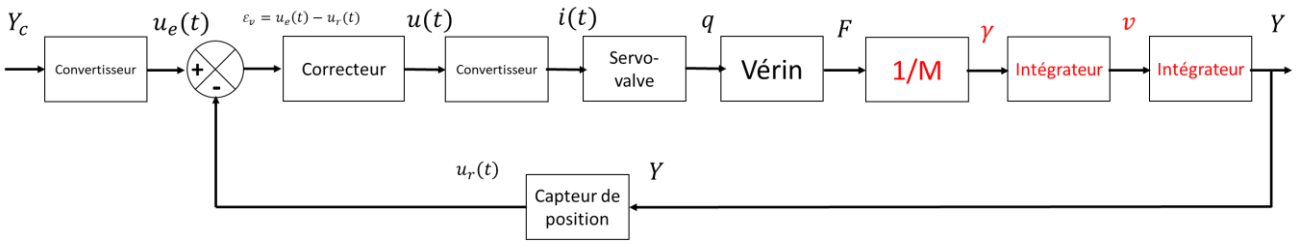


ELEMENTS DE CORRECTION :

Q1 :



OU



Q2 :

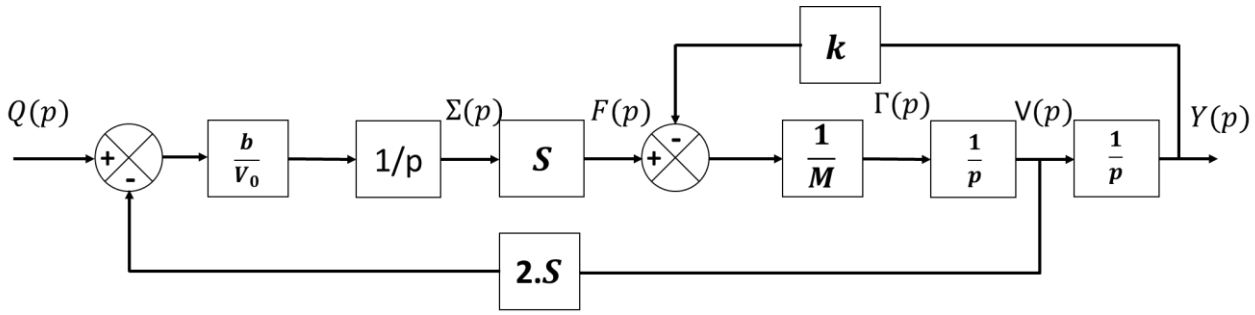
$$Q(p) = 2.S_p.Y(p) + \frac{V_0}{b}.p.\Sigma(p)$$

$$J.p^2.A(p) = R.F(p) - \mu.A(p)$$

$$F(p) = \Sigma(p).S$$

$$A(p) = \frac{Y(p)}{R}$$

Q3 :



Q4 :

$$H_1(p) = \frac{Y(p)}{Q(p)} = \frac{1}{p.(\frac{V_0.k}{b.S} + 2.S + \frac{V_0.M}{b.S}.p^2)}$$

Q5 :

$$H_2(p) = \frac{1}{(1+\tau.p).g + \frac{1+p^2/\beta^2}{K.A.G.\delta}}$$

Q6 :

$$H_2(p) = \frac{\frac{K.A.G.\delta}{1+K.A.G.\delta.g}}{1 + \frac{\tau.K.A.G.\delta.g}{1+K.A.G.\delta.g}.p + \frac{1}{\beta^2(1+K.A.G.\delta.g)}.p^2}$$

Q7 :

$z = 0{,}6$ et $\omega_0 = 311\ rad/s$

$K = 16{,}35$

$\tau = 0{,}32\ s$