

$$G(s) = \frac{1}{s(s+10)(s+50)}$$

$$\begin{cases} \zeta \leq 7.5\% \quad (\delta \geq 0.63) \\ T_a \leq 0.4s \end{cases}$$



$$T_a \approx 0.88 \text{ s}$$

$$\kappa = 2460$$

$$S\% \approx 7.3\% < 7.5\%$$

$$\kappa \uparrow \Rightarrow T_a \downarrow S\% \uparrow$$

$$\kappa = 2490$$

$$T_a = 0.88$$

$$S\% = 7.6\%$$

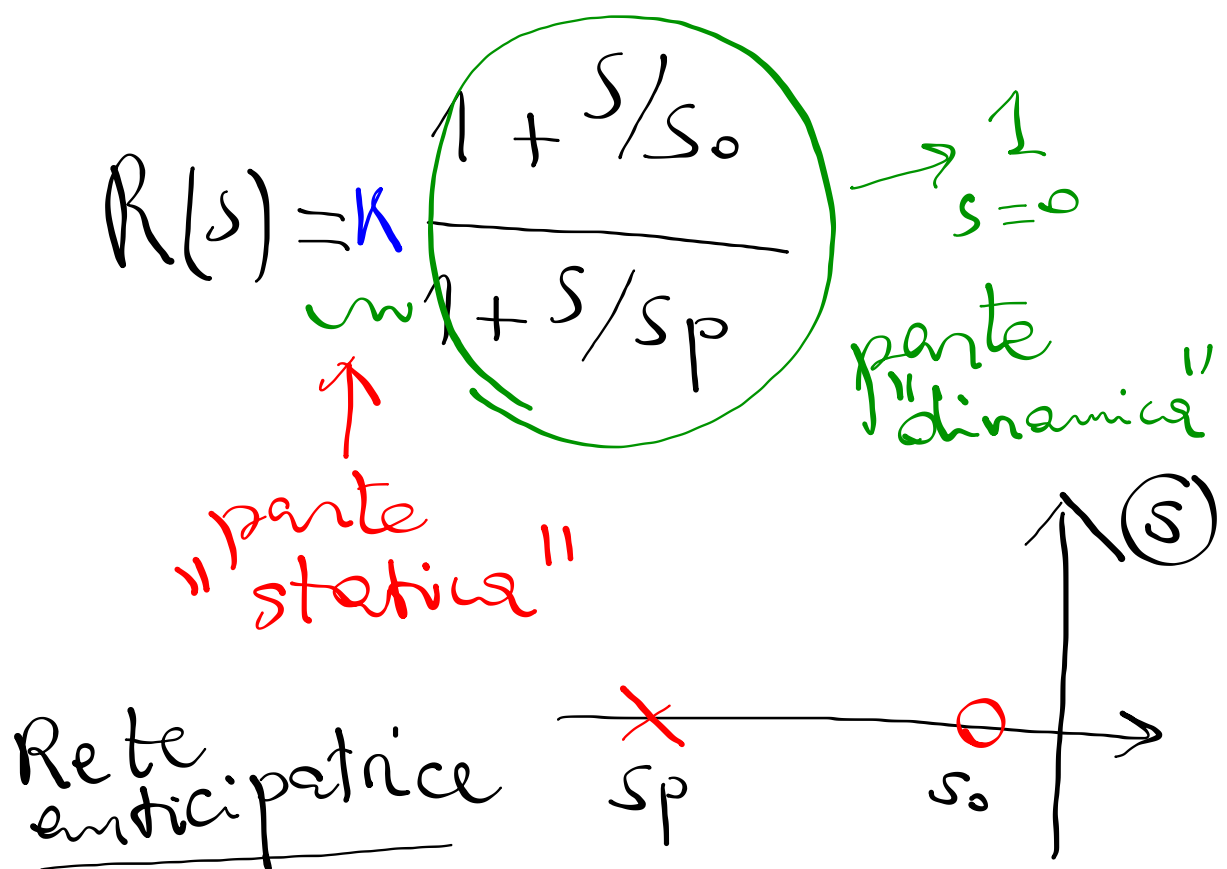
Il regolatore proporzionale non basta per soddisfare le specifiche.

~~$$R(s) = K$$~~

Progetto di una rete correttiva
di tipo anticipatrice

Migliora i margini di
stabilità e rende il
sist. compensato più
"veloce" (banda più elevata)

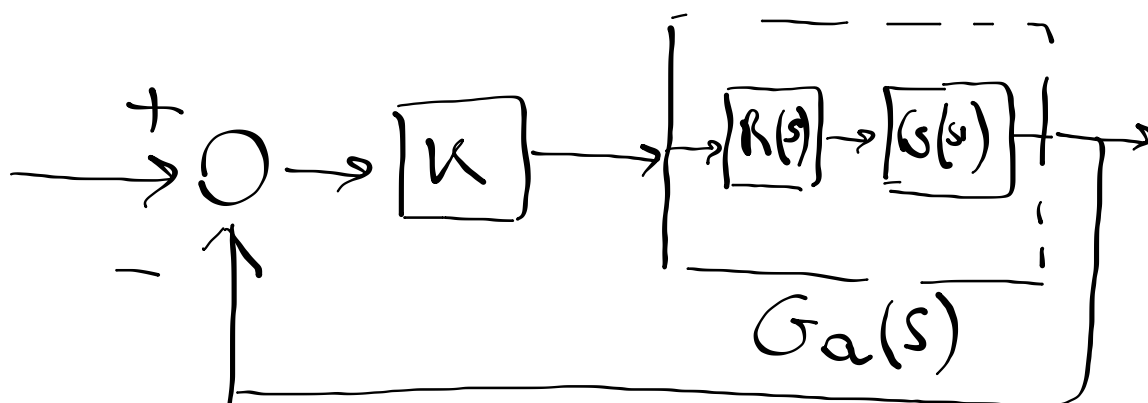
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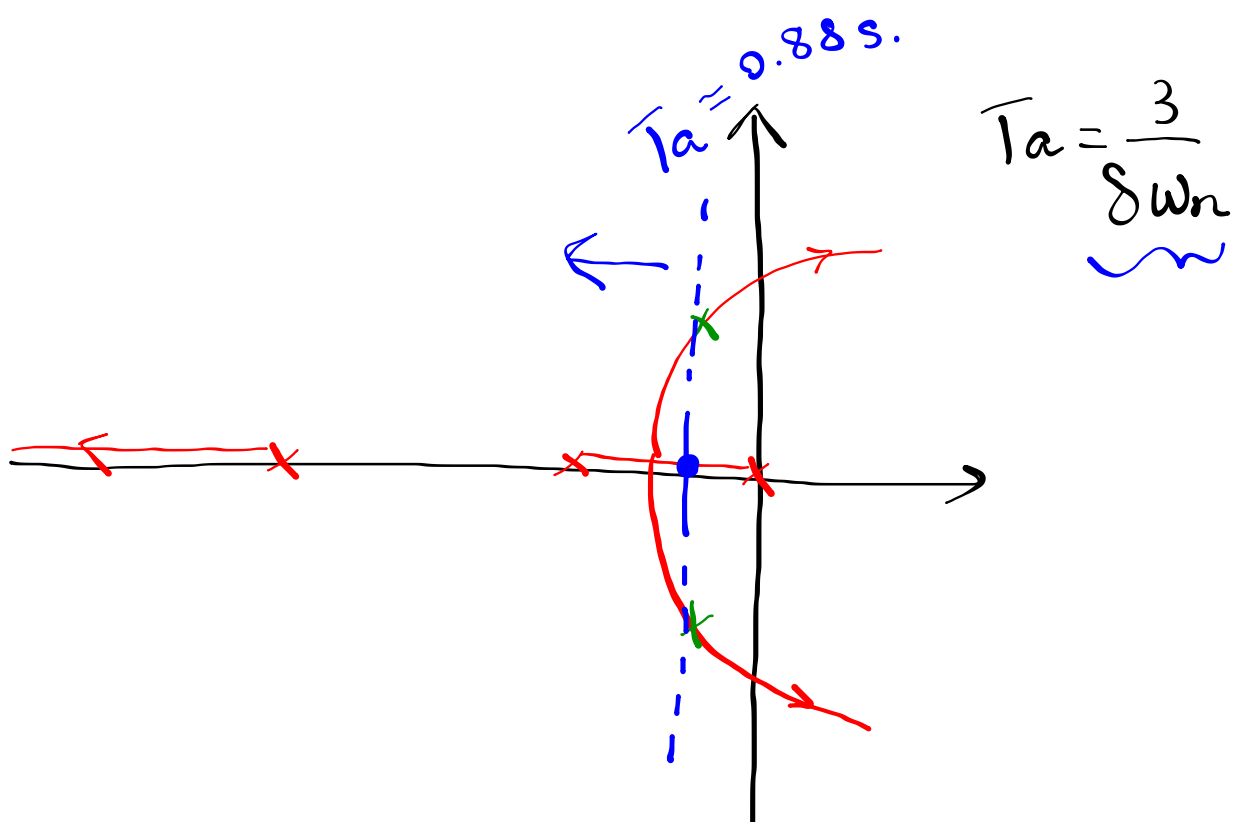


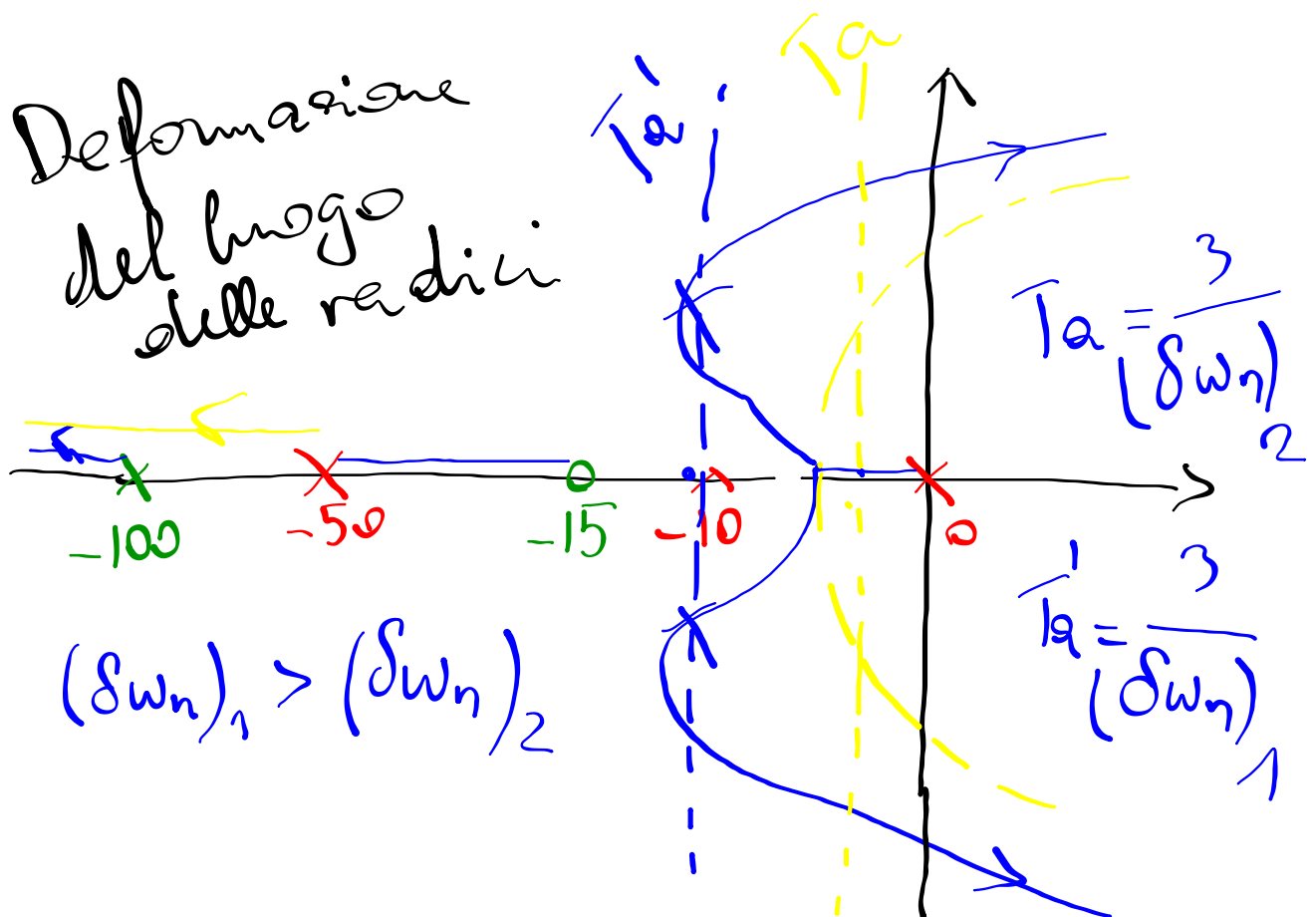
$$R(s) = \underbrace{K}_{\underbrace{1 + s/s_p}} \frac{1 + s/s_o}{1 + s/s_p}$$

$$\begin{cases} s_o = 15 \\ s_p = 100 \end{cases}$$

K da determinare







$$K = 11284$$

$$\begin{cases} T_d = 0.28 s < 0.4 s \quad \underline{\text{OK}} \\ \delta\% = 17\% > 7.5\% \quad \text{NO!} \end{cases}$$

$$K \downarrow \Rightarrow \delta\% \downarrow \quad T_d \uparrow$$