$$H(s) = \frac{V_L}{V_I} = \frac{-H \cdot \omega_0^2}{s^2 + s\frac{\omega_0}{Q} + \omega_0^2} \xrightarrow{\omega_0 = 1} \frac{V_L}{V_I} = -K \cdot \frac{1}{s^2 + s\frac{1}{Q} + 1}$$

$$\rightarrow V_L\left(s^2 + s\frac{1}{Q}\right) + V_L = -K \cdot V_I$$

$$V_L \cdot s\left(s + \frac{1}{Q}\right) = -(K V_I + V_L) \rightarrow V_L \; s = \underbrace{-(K \cdot V_I + V_L) \cdot \frac{1}{s + \frac{1}{Q}}}_{(1)} \; V_B$$

$$\therefore \boxed{V_L = V_B \cdot \frac{1}{s}} \quad (2)$$

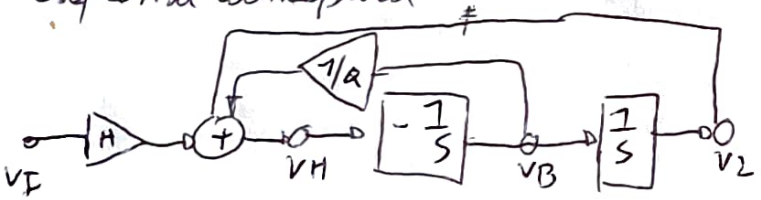
De (1): $V_B = -(K V_I + V_L) \cdot \frac{1}{s + \frac{1}{Q}} \rightarrow V_B \cdot s + V_B \cdot \frac{1}{Q} = -(K \cdot V_I + V_L)$

$$\rightarrow V_B \cdot s = \underbrace{-(K \cdot V_I + V_L + V_B \cdot \frac{1}{Q})}_{(3)} \; V_H \rightarrow \boxed{V_B = -\frac{1}{s} \cdot V_H} \quad (4)$$

de las ec. (2), (3) y (4) $\rightarrow$

$$\begin{cases} V_H = K \cdot V_I + V_L + V_B \cdot \frac{1}{Q} \\ V_B = -\frac{1}{s} \cdot V_H \\ V_L = V_B \cdot \frac{1}{s} \end{cases}$$

Esquema conceptual



Reflejado al circuito analizado.