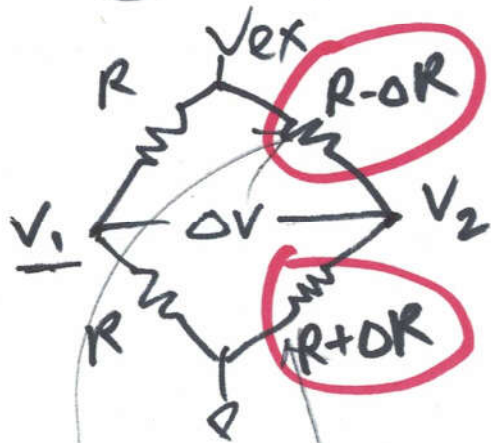


Strain Gauge

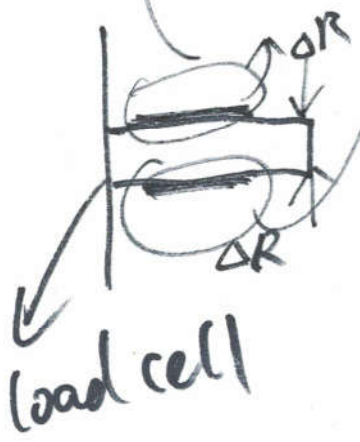
② Half Bridge.



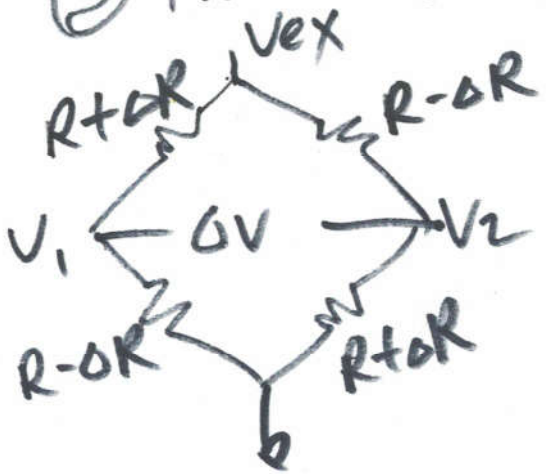
$$\begin{aligned} \Delta V &= V_2 - V_1 \\ &= V_{ex} \left(\frac{R + \Delta R}{2R} - \frac{1}{2} \right) \\ &= V_{ex} \left(\frac{R + \Delta R - R}{2R} \right) \\ &= V_{ex} \cdot \frac{\Delta R}{2R} \end{aligned}$$

① Quarter Bridge

$$\Delta V = V_{ex} \cdot \frac{\Delta R}{4R}$$



③ Full Bridge



$$\begin{aligned} \Delta V &= V_2 - V_1 \\ &= V_{ex} \left(\frac{R + \Delta R}{2R} - \frac{R - \Delta R}{2R} \right) \\ &= V_{ex} \left(\frac{R + \Delta R - R + \Delta R}{2R} \right) \\ &= V_{ex} \left(\frac{2\Delta R}{2R} \right) \\ &= V_{ex} \frac{\Delta R}{R} \end{aligned}$$

①