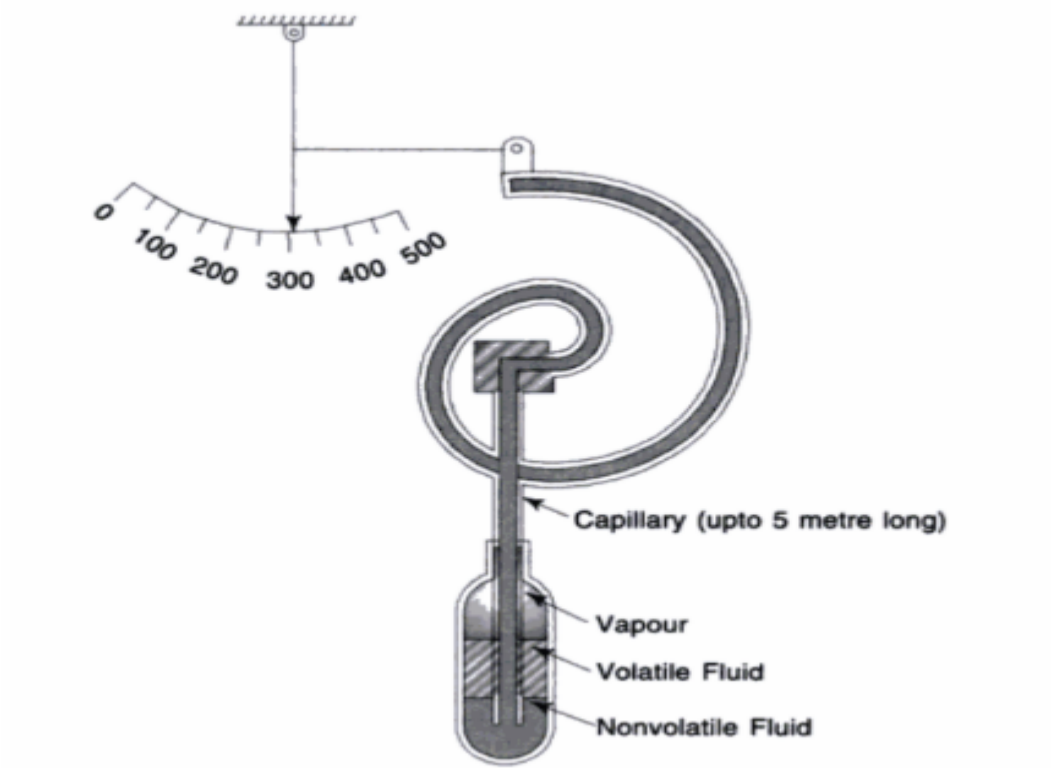
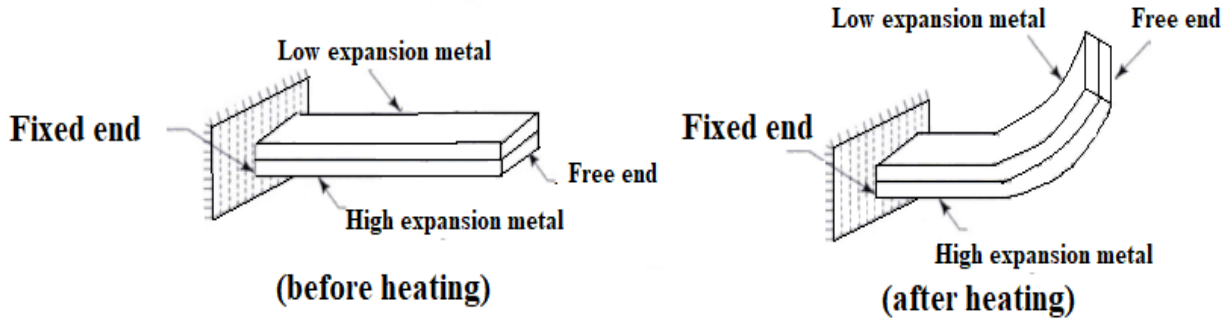
Unit 3

VAPOUR PRESSURE THERMOMETER

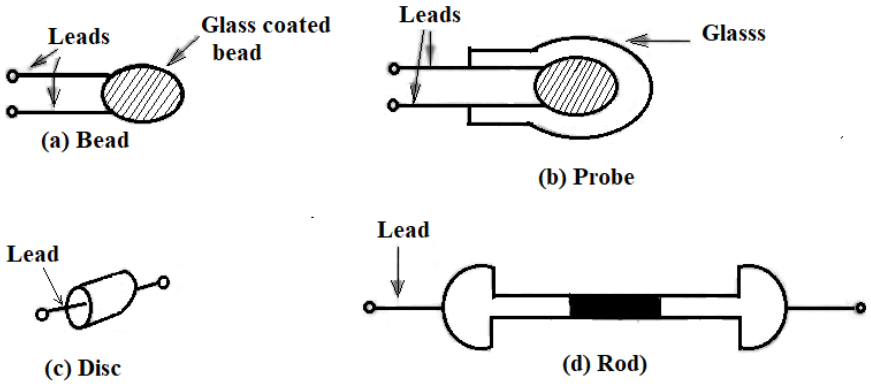


Bimetallic thermometer.

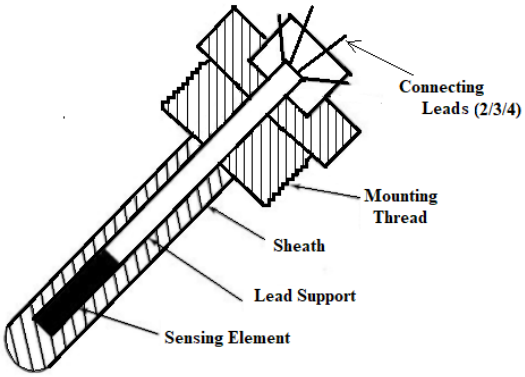


Bimetallic Strips

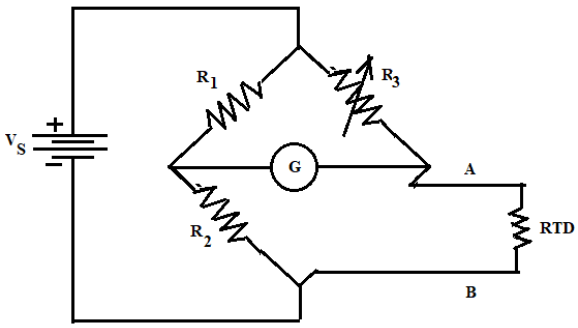
Thermistors



RTD (Resistance Temperature Detectors)



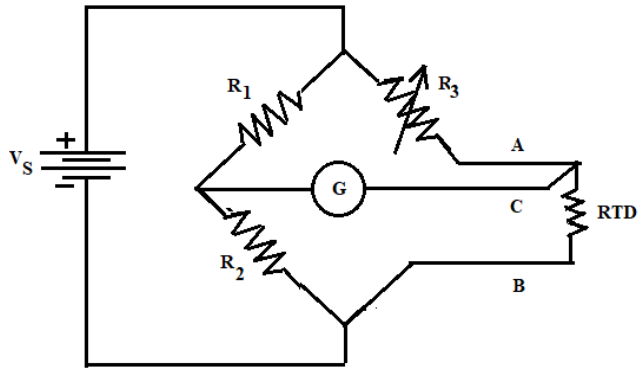
1) TWO WIRE RTD



$R_1+R_3 = R_2 + A+B+RTD$

$\underline{R_3 = A+B+RTD}$ (since R1 $=R_2$)

2)THREE WIRE RTD



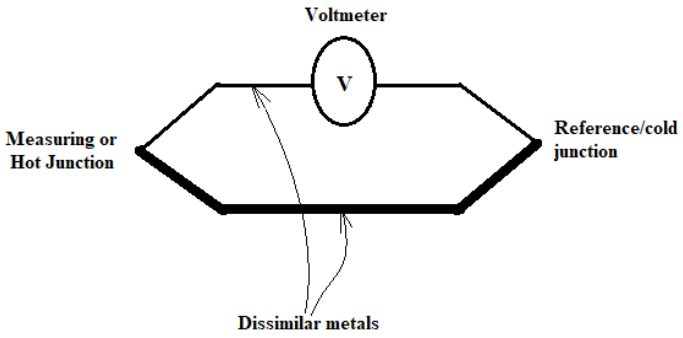
When bridge is Balanced (Galvanometer I=0)

$R_1+R_3 + A + C = R_2 +B+RTD + C$

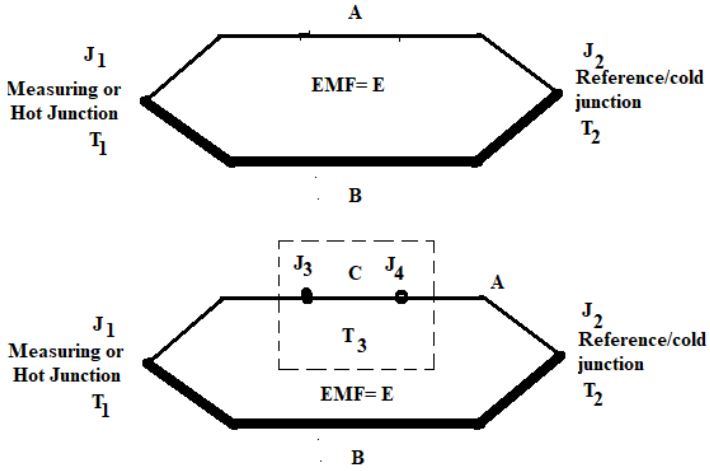
$\underline{R_3 = RTD +B- A}$ (since $R_1 =R_2$)

$\mathbf{\underline{R_3} \approx \underline{RTD}}$ (since A =B)

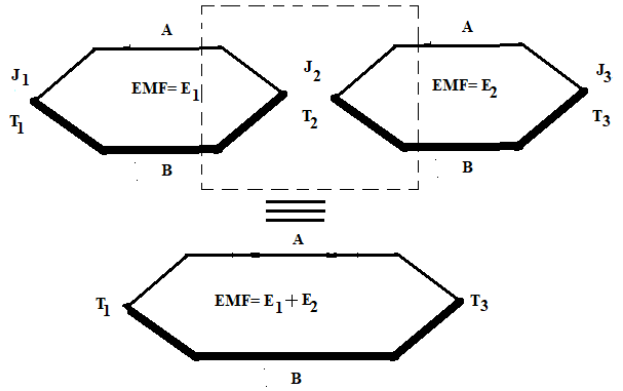
THERMOCOUPLE



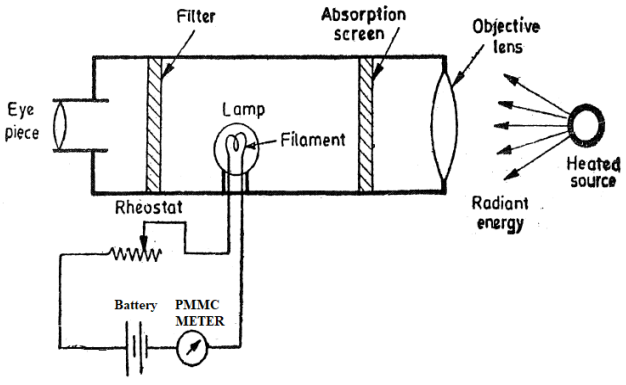
Law of intermediate metals

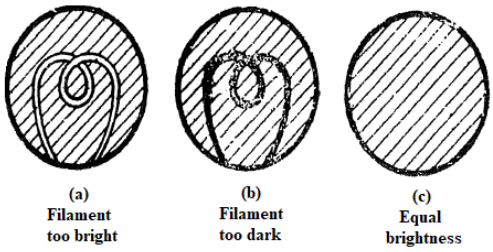


Law of intermediate temperatures



Optical pyrometer:





Radiation pyrometer.