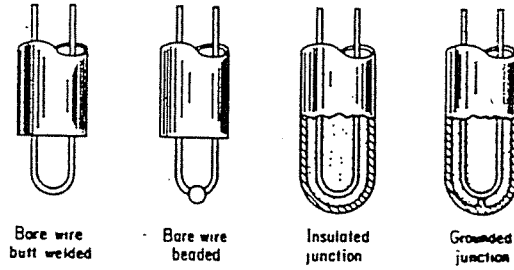
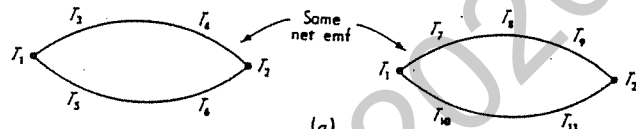


(a)

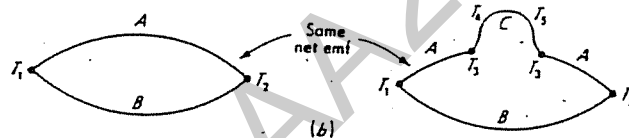


(b)

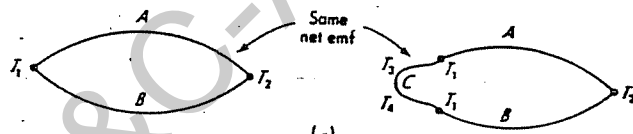
Figure 8.8 Basic thermocouple and junction types.



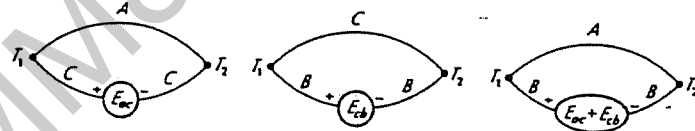
(a)



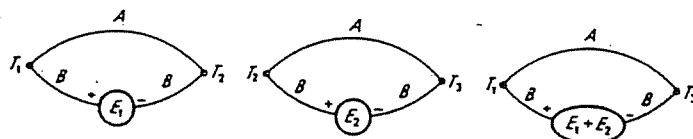
(b)



(c)



(d)



(e)

Figure 8.9 Thermocouple laws.

Figura 1.1 Caratteristiche della Fem in funzione della temperatura per alcuni materiali.

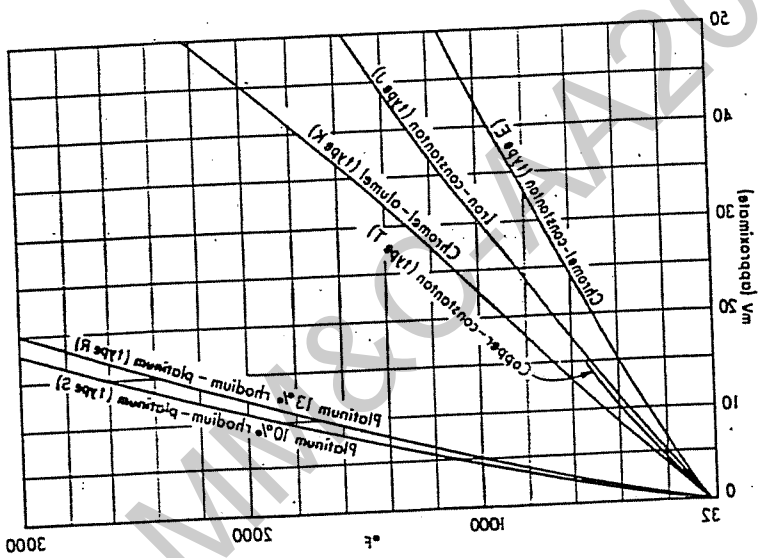
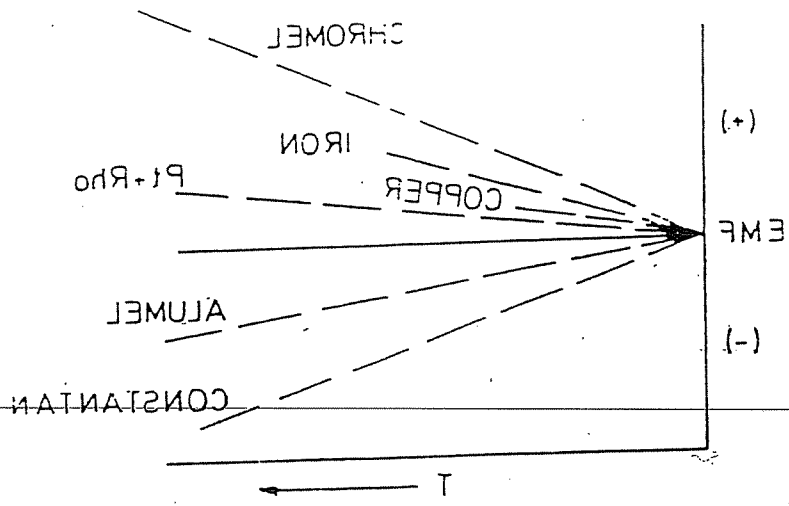


Figure 8.10 Thermocouple temperature/voltage curves.

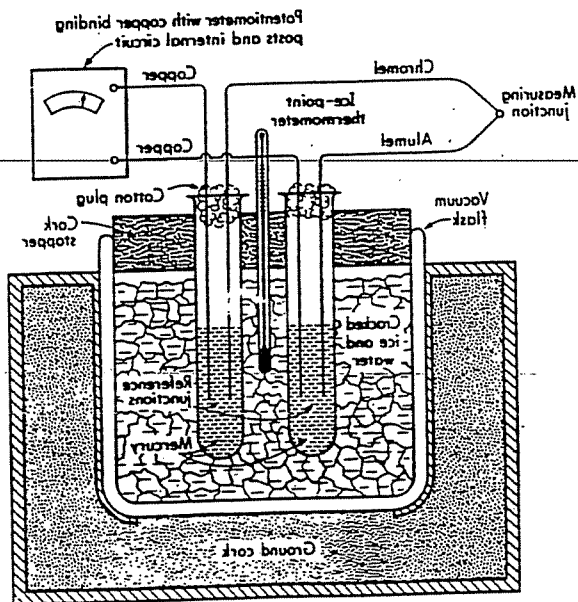


Figure 8.11 Ice-path reference junction.

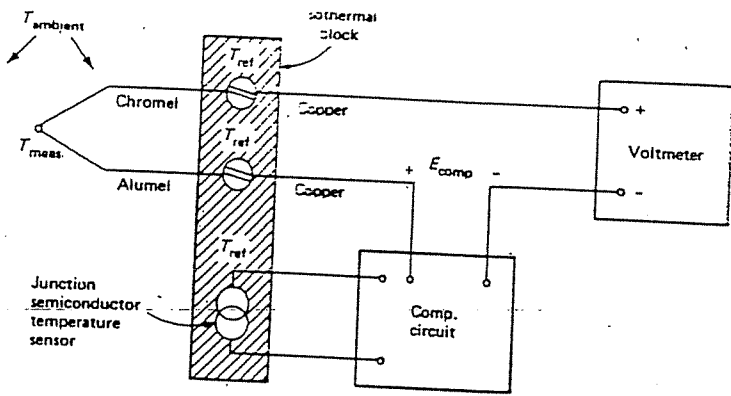


Figure 8.12 Isothermal block reference-junction technique.

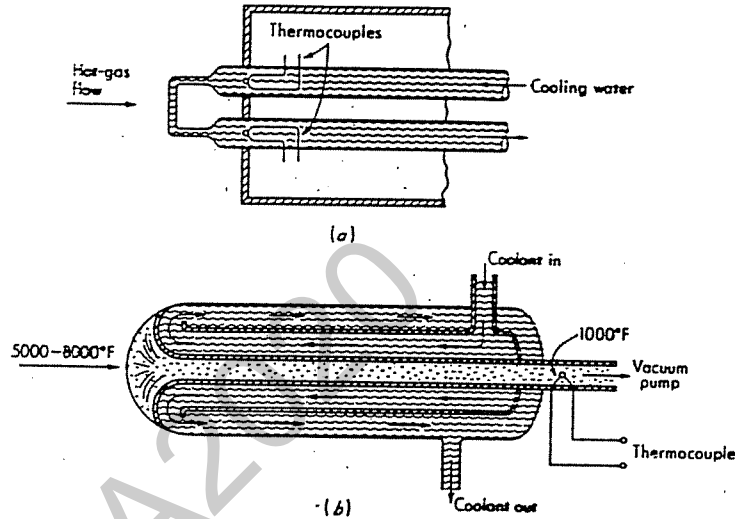


Figure 8.13 Cooled thermocouples.

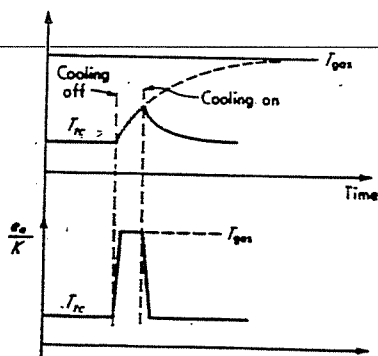
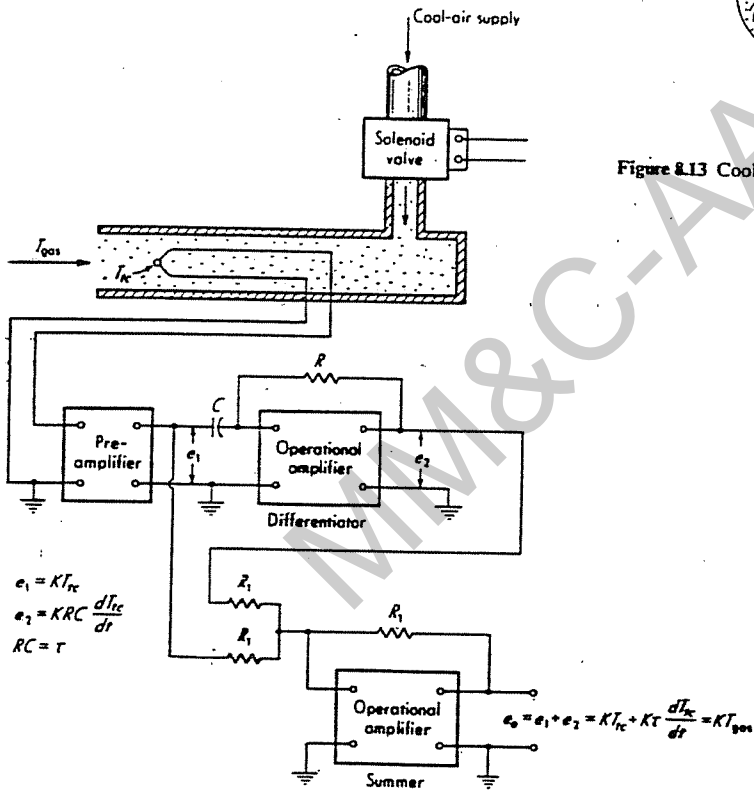
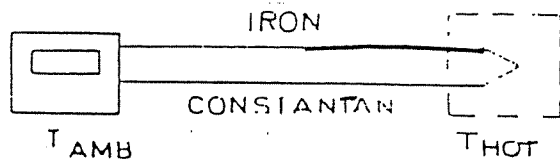
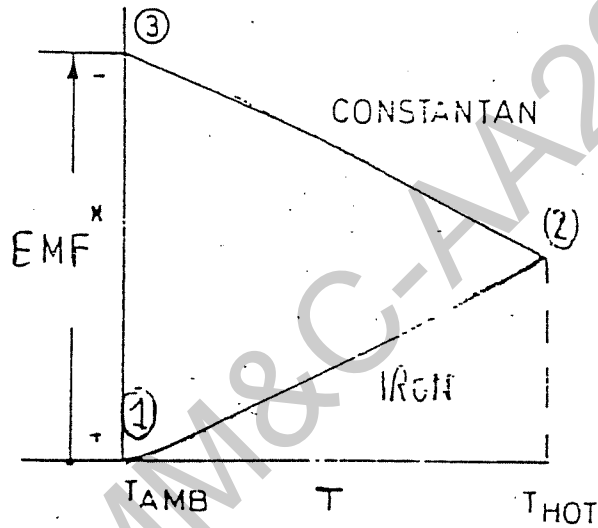
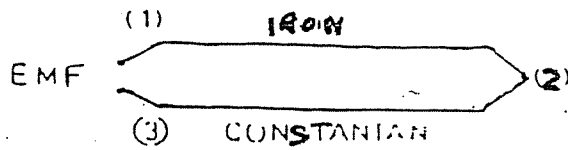


Figure 8.14 Pulsed-thermocouple technique.



$$EMF = \epsilon_{A,B} (T_{HOT} - T_{AMB})$$



* NOTE : THERE IS AN AMPLICIT SIGN CONVENTION SUCH THAT IF POINT 3 LIES ABOVE POINT 1 THEN POINT 3 IS ELECTRICALLY NEGATIVE WITH RESPECT TO POINT 1.

Figura 1.3 Sistema di misura con termocoppie senza zona di riferimento.

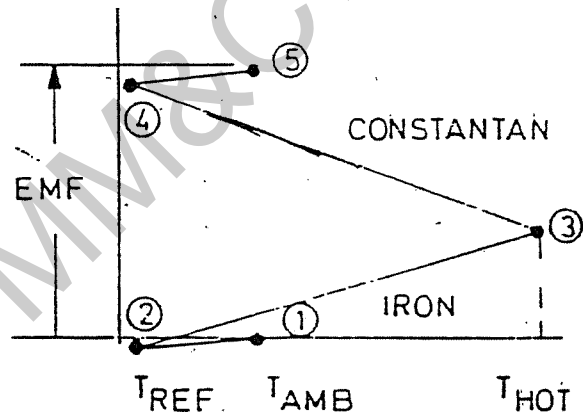
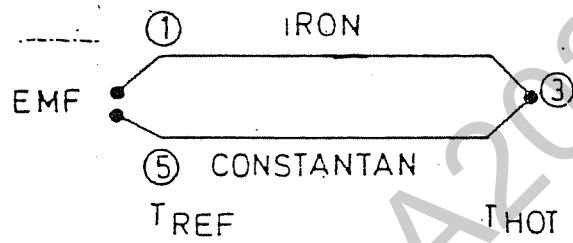
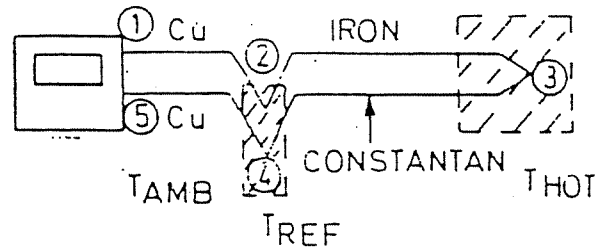


Figura 1.4

Sistema di misura con una zona di riferimento. I configurazione.

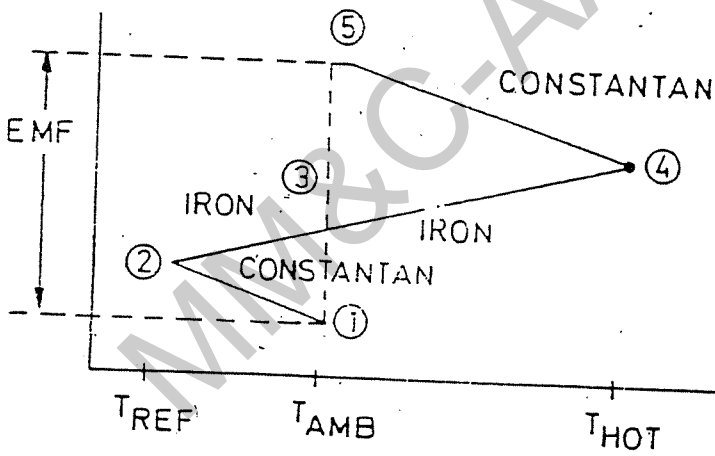
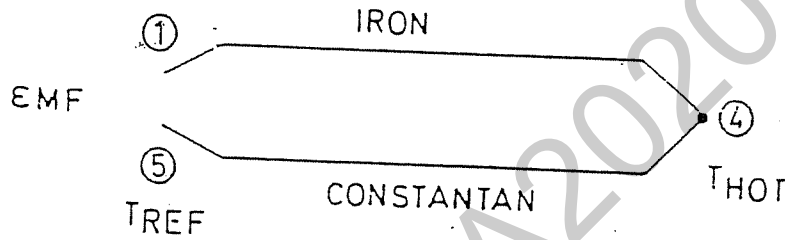
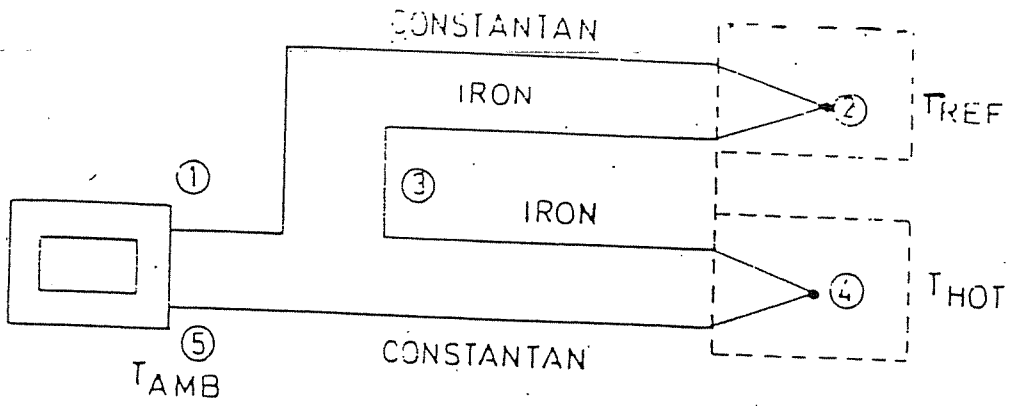


Figura 1.5

Sistema di misura con una zona di riferimento. Il configurazione.

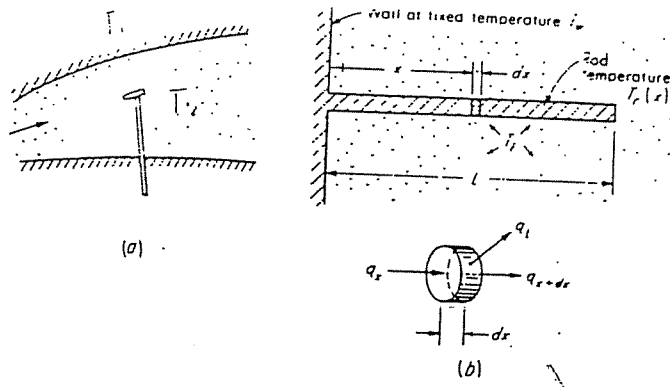


Figure 8.54 Probe configuration and conduction-error analysis.

$$E_{\text{err}} = T_w - T_p = \frac{T_w - T_f}{\frac{3.24 \text{ cm} \cdot K}{L}} \quad \text{if } L = 1$$

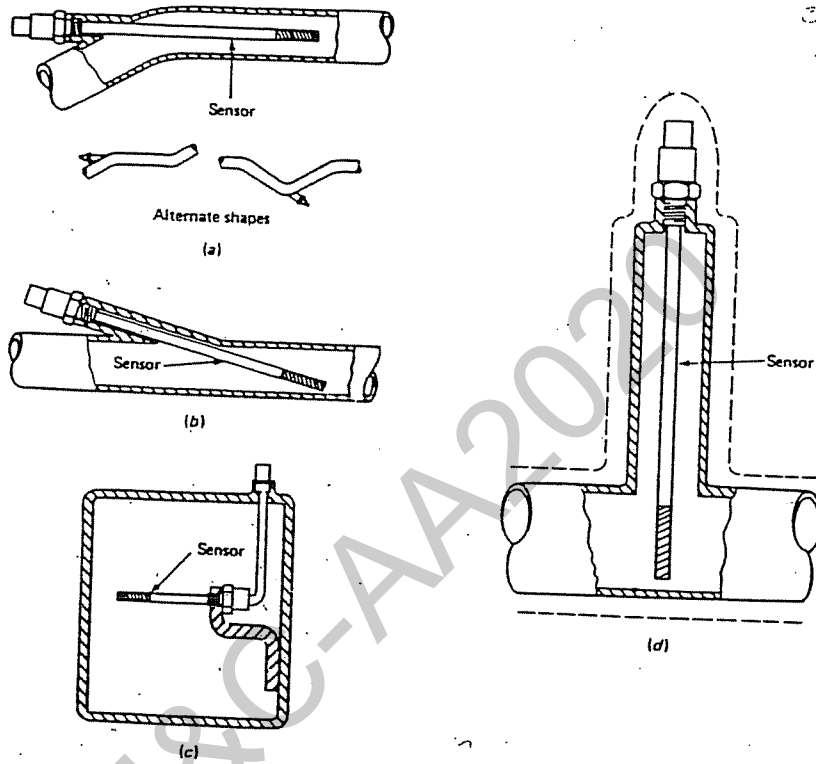


Figure 8.56 Schemes to reduce conduction error.

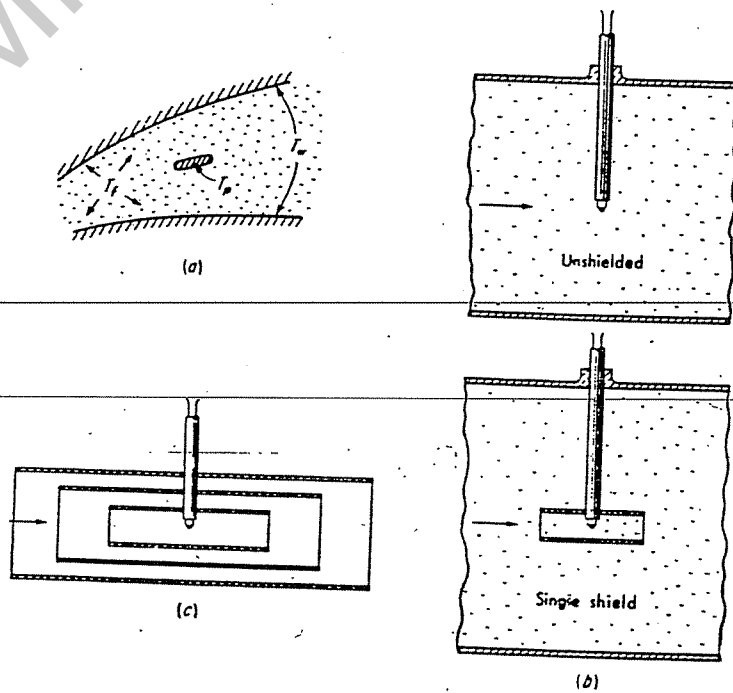


Figure 8.57 Radiation-error analysis and shielding.