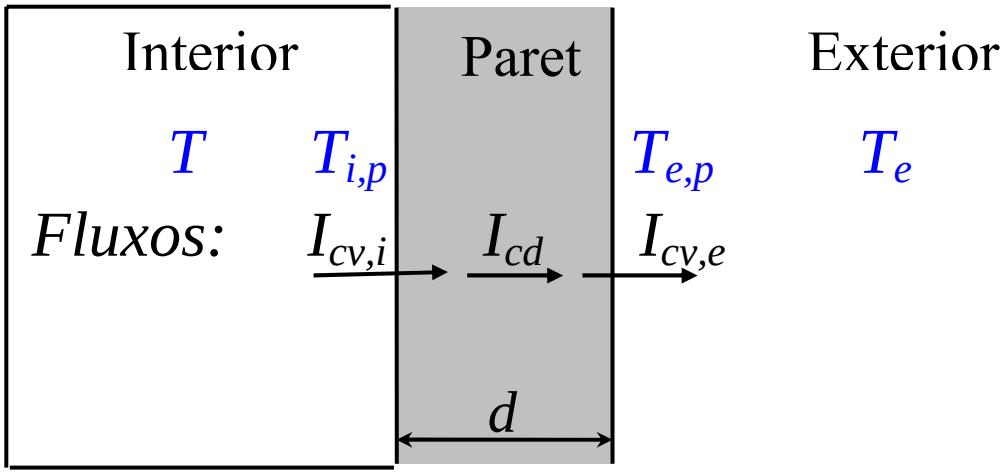
Transferència de calor



Aire interior (T_i) → paret: Convecció:

$$I_{cv,i} = q_i \; A\,(T_i - T_{i,p}) \quad (1)$$

Dins la paret: Conducció:

$$I_{cd} = \frac{k}{d} A\,(T_{i,p} - T_{e,p}) \quad (2)$$

Paret → aire exterior (T_e): Convecció:

$$I_{cv,e} = q_e \; A\,(T_{e,p} - T_e) \quad (3)$$

$$q_e = 8.1 \text{ W K}^{-1} \text{ m}^{-2}.$$

Estat estacionari: $I_{cv,i} = I_{cd} = I_{cv,e} \equiv I$: (1), (2) i (3)→

$$I = \lambda \; A\,(T_i - T_e) \quad (4) \qquad \text{, on: } \frac{1}{\lambda} = \frac{1}{q_i} + \frac{d}{k} + \frac{1}{q_e} \quad (5)$$

mesurar→ PARET de...	T_i	$T_{i,p}$	$T_{e,p}$	T_e	I/A **Eq. (3)**	λ **Eq. (4)**	k **Eq. (2)**	q_i **Eq. (1)**
Fusta (d= 1cm)								
Fusta (d= 2cm)								
Poliestirè (d= 2cm)								
Vidre (d= 5mm)								