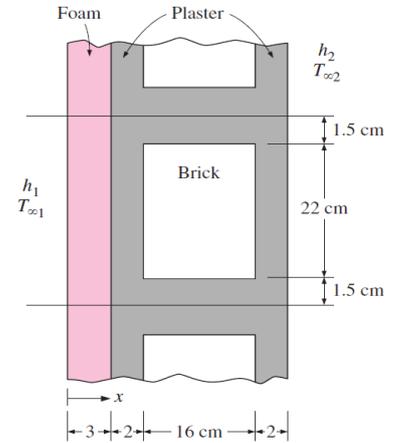


Homework n°01

Exercise:

A **3-m-high** and **5-m-wide** wall consists of long **16-cm x 22-cm** cross section horizontal bricks ($k = 0.72 \text{ W/m}\cdot\text{°C}$) separated by **3-cm-thick** plaster layers ($k = 0.22 \text{ W/m}\cdot\text{°C}$). There are also **2-cm-thick** plaster layers on each side of the brick and a **3-cm-thick** rigid foam ($k = 0.026 \text{ W/m}\cdot\text{°C}$) on the inner side of the wall, as shown in Fig. 2–6. The indoor and the outdoor temperatures are 20°C and -10°C , and the convection heat transfer coefficients on the inner and the outer sides are $h_1 = 10 \text{ W/m}^2\cdot\text{°C}$ and $h_2 = 25 \text{ W/m}^2\cdot\text{°C}$, respectively.



(Figure 2.6)