Problem 2B.8

Analysis of a capillary flowmeter (see Fig. 2B.8).

Determine the rate of flow (in lb$_m$/hr) through the capillary flow meter shown in the figure. The fluid flowing in the inclined tube is water at 20°C, and the manometer fluid is carbon tetrachloride (CCl$_4$) with density 1.594 g/cm$^3$. The capillary diameter is 0.010 in. Note: Measurements of $H$ and $L$ are sufficient to calculate the flow rate; $\theta$ need not be measured. Why?