Consider the situation described in Problem 7.24 of I&D. In addition, assume that the transverse width is 2 cm and that the supporting rods are always at ambient temperature (25°C). The strip temperature of 35°C as given in I&D should be understood to refer to the temperature at the back edge of the strip and half-way between the supporting rods. The thickness of the strip is 1 mm. Do not answer the questions posed by I&D. Instead, please respond to the following:

(a) What is the power requirement if \( V = 1 \text{ m/s} \)? If \( V = 5 \text{ m/s} \)? If \( V = 25 \text{ m/s} \)?

(b) If the accuracy with which the temperature can be read is \( \pm 0.2^\circ \text{C} \), what is the uncertainty in \( V \) if \( V \approx 1 \text{ m/s} \)? If \( V \approx 25 \text{ m/s} \)?

(c) Is this a good idea?