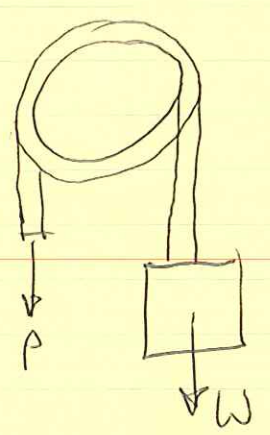


PROB. 8.121

$$\frac{T_2}{T_1} = e^{\mu_s \beta} \quad , \quad \beta = 2\pi + \pi = 3\pi$$

~~$\frac{W}{P} = e^{3\pi \mu_s}$~~ $P_{min} \leq P \leq P_{max}$



P_{min} : IMPENDING MOTION: WEIGHT MOVES DOWN

$$\frac{W}{P_{min}} = e^{3\pi \mu_s}$$

$$P_{min} = \frac{W}{e^{3\pi \mu_s}} = \frac{(300 \text{ LB})}{e^{3\pi(0.15)}} = 73 \text{ LB}$$

P_{max} : IMPENDING MOTION: WEIGHT MOVES UP

$$\frac{P_{max}}{W} = e^{3\pi \mu_s}$$

$$P_{max} = W e^{3\pi \mu_s} = (300 \text{ LB}) e^{3\pi(0.15)} = 1233 \text{ LB}$$

$73 \leq P \leq 1233 \text{ LB}$