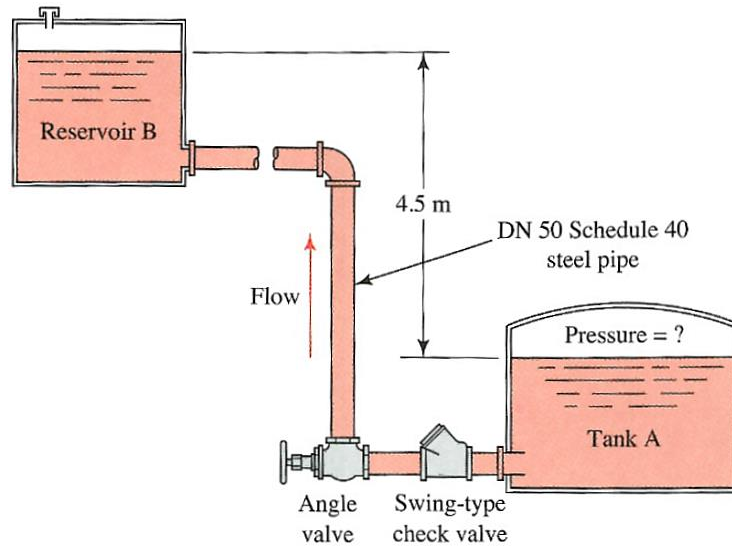


meng 263 – Fluids & Heat Transfer

Assignment 1

Question 1

- 11.2 For the system shown in Fig. 11.14, kerosene ($sg = 0.82$) at 20°C is to be forced from tank A to reservoir B by increasing the pressure in the sealed tank A above the kerosene. The total length of DN 50 Schedule 40 steel pipe is 38 m. The elbow is standard. Calculate the required pressure in tank A to cause a flow rate of 435 L/min.



Question 2

- 11.7 A liquid refrigerant flows through the system, shown in Fig. 11.19, at the rate of 1.70 L/min. The refrigerant has a specific gravity of 1.25 and a dynamic viscosity of 3×10^{-4} Pa·s. Calculate the pressure difference between points A and B. The hydraulic tube is drawn steel, with an outside diameter (OD) of 15 mm, a wall thickness of 1.5 mm, and a total length of 30 m.

