

October 21, 2015

NAME

Fluids-ID

Quiz 7. Determine the magnitude of the anchoring force needed to hold the horizontal elbow and nozzle combination shown in Figure in place. Atmospheric pressure is 100 kPa (abs). The gage pressure at section (1) is 100 kPa. At section (2), the water exits to the atmosphere ($\rho_{water} = 998 \text{ Kg/m}^3$)

For steady incompressible flow (uniform flow over CS),

Momentum equation:

$$\sum \underline{F} = \sum_{CS} \rho \underline{V} \cdot \underline{V} \cdot \underline{A}$$

Note: Attendance (+2 points), format (+1 point)

