**Solution 1.14**

A plastic tank is filled with water. The weight of the combined system is to be determined.

***Assumptions*** The density of water is constant throughout.

***Properties*** The density of water is given to be ρ = 1000 kg/m3.

***Analysis*** The mass of the water in the tank and the total mass are

*m*tank = 3 kg

*V* =0.2 m3

H2O

*mw =ρV =*(1000 kg/m3)(0.2 m3) = 200 kg

*m*total = *mw + m*tank *=* 200 + 3 = 203 kg

Thus,

