
EXAMPLE: Yes, they use these in nuclear power plants

Warm water enters a cooling tower at 45°C at a rate of 130 kg/s to be cooled to 30°C . Atmospheric air at a dry bulb temperature of 25°C and $\phi = 50\%$ enters the tower to effect the cooling, and leaves the tower at a saturated state at 32°C . Neglecting the power input to the fan, determine

- (a) the mass flow rate of dry air into the tower,
- (b) the volumetric flow rate of air entering the tower (at 1), and
- (c) how much water evaporates in kg/s .



