

Problem 108A

A capillary tube of internal diameter 10^{-3} m is placed vertically in a bucket of water. How high will the level in the capillary rise above the level in the bucket if the contact angle at the inner walls of the tube is 15° and the surface tension is 0.07 kg/s^2 ?

Consider a smaller capillary with the same contact angle and surface tension. If the water will vaporize below a pressure of 0.017 atm what is the maximum capillary height which can, in principle, be achieved and what size of capillary is necessary to achieve this elevation?