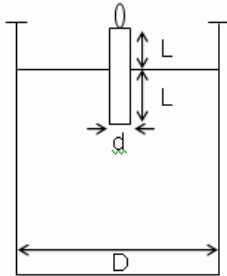


Answer on Question #58804-Physics-Mechanics | Relativity

A candle of diameter d is floating on a liquid in a cylindrical container of diameter D ($D \gg d$). If it is burning at the rate of 2 cm/hr then what will be the resultant rate of change of the top of the candle?

Solution



The density of candle is a half of density of liquid. Therefore, it will always remain half in liquid. Hence, if it burns 2 cm/hr, the candle will come up by 1 cm from the water in 1 hour.

Answer: 1 cm/hr.