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Capillary penetration of a liquid between two tilted plates making a small angle ABEL LOPEZ-VILLA, Esime Azcapotzalco IPN, FRANCISCO HIGUERA, Etsi Aeronauticos UPM, AYDET JARA, SERGIO DE SANTIAGO, ABRAHAM MEDINA, Esime Azcapotzalco IPN — The penetration of a wetting liquid in the narrow gap between two tilted plates making a small angle is analyzed in the framework of the lubrication approximation. At the beginning of the process, the liquid rises independently at different distances from the line of intersection of the plates except in a small region around this line where the effect of the gravity is negligible. The maximum height of the liquid initially increases as a function of time and the angle of inclination. At later times, the motion of the liquid is confined to a thin layer around the line of intersection whose height increases as a power of time. The evolution of the liquid surface is computed numerically and compared with the results of a simple experiment.

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