

Safety Precautions:

Please make sure all the equipment is in safe condition before and after conducting the experiment.

Objectives:

1. To construct the boiling curve of water.

Introduction:

Boiling takes different forms, depending on the value of the excess temperature ΔT_{excess} . Four different boiling regimes are observed: natural convection boiling, nucleate boiling, transition boiling, and film boiling. These regimes are illustrated on the boiling curve in Figure 1, which is a plot of boiling heat flux versus the excess temperature. Although the boiling curve given in this figure is for water, the general shape of the curve remains the same for different fluids. The specific shape of the curve depends on the fluid–heating surface material combination and the fluid pressure, but it is practically independent of the geometry of the heating surface.

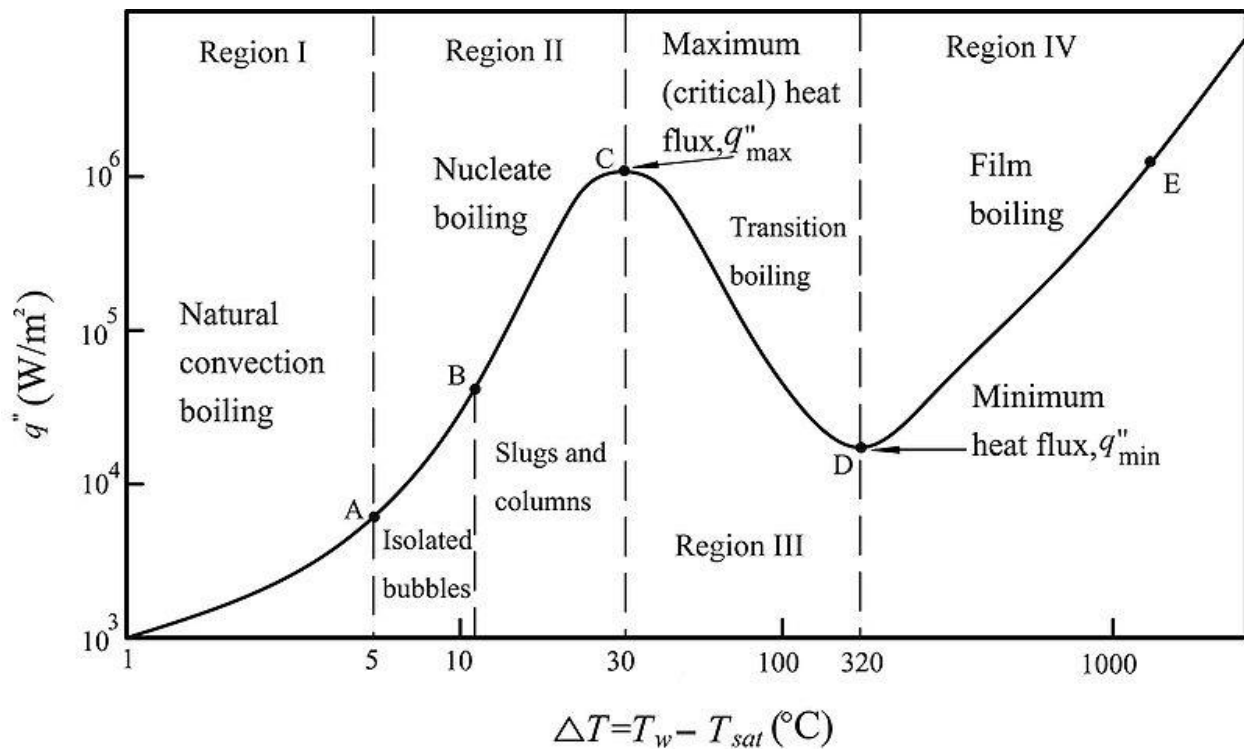


Figure 1 The Boiling Curve

Deliverables

Your report should include the background description of the experiment, objectives, procedures, data collected, results calculated, discussions and conclusion. Hand in your work in a zip file containing all relevant files.