

Safety Precautions:

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

Objectives:

1. To observe and qualitatively characterize the different regimes in pool boiling.

Introduction:

Boiling is liquid-to-vapor phase change process that occurs at the solid-liquid interface when the temperature of the surface is maintained at a temperature T_s that exceeds the saturation temperature T_{sat} corresponding to the pressure of the liquid that is in contact with the surface. The objective of this experiment is to observe behaviours associated with the different regimes of pool boiling. There are 4 regimes of pool boiling namely natural convection boiling, nucleate boiling, transition boiling and film boiling as shown in Figure 1.1.

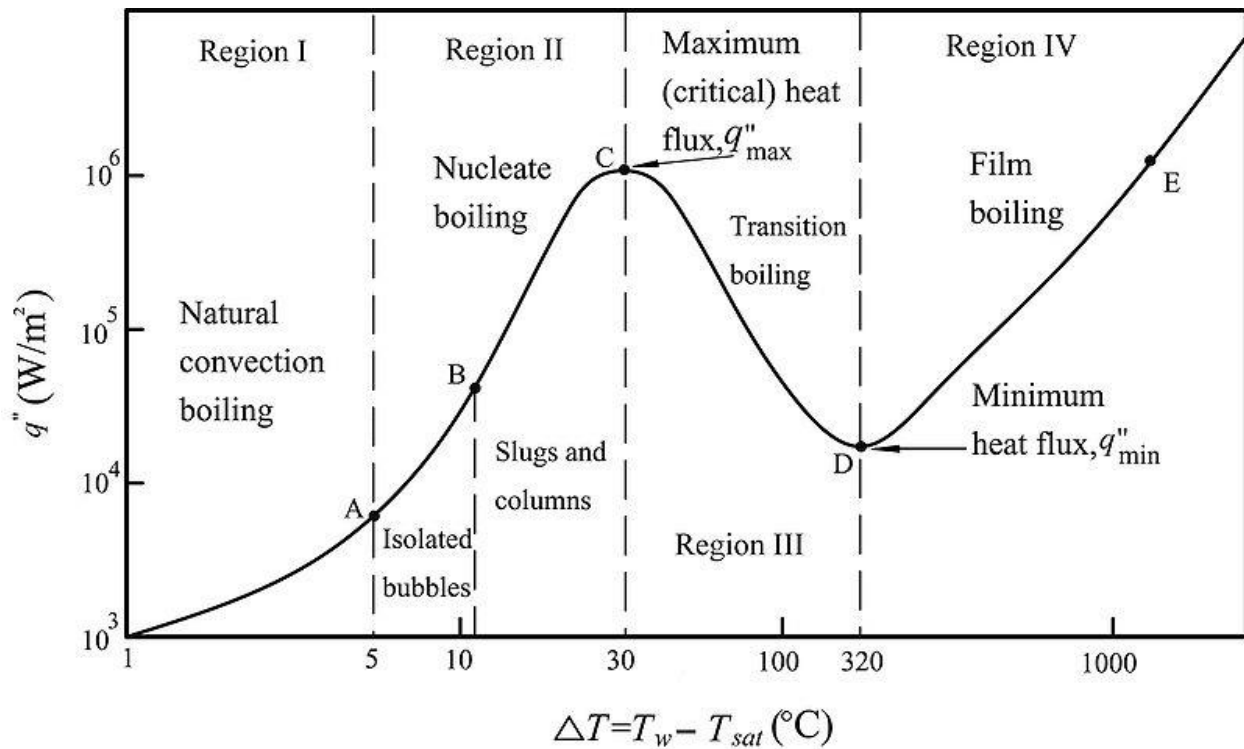


Figure 1.1 The Boiling Curve

Deliverables

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