

Chapter 6

Conclusions



Following conclusions are drawn.

- EHD enhancement of boiling and condensation has been discussed in detail. This enhancement technique is useful for practical purposes.
- More research is needed to compare the EHD performance vis-à-vis other enhancement techniques.
- Heat transfer enhancement in simultaneous heat–mass transfer process has been discussed. The enhancement of gas phase or liquid phase or both the phases has to be considered. Mass transfer during humidification and dehumidification is a subject of involved study in which heat–mass transfer analogy is often drawn.
- Cooling towers use enhanced surface geometries.
- Water film enhancement in fin-and-tube heat exchangers used for heat rejection is of interest, and surface wetting is a matter of serious investigation.
- Mass transfer in both the liquid and the gas phases need to be investigated more in detail.
- Typical solid–liquid suspension is not of much use. Solid–gas suspensions, fluidized beds with finned surfaces, are of interest.
- Aqueous dilute polymer additives are useful.
- Minute amount of a volatile fluid and addition of a surfactant enhance nucleate boiling heat transfer of water.
- Additives promote high-performance dropwise condensation depending upon surface tension of the fluid.