

Abstract

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CFD simulation of heat and mass transfer of Lithium bromide flow over absorber circular tubes

The absorber is one of the most critical components in the vapor absorption systems since it is one of the largest components and has complicated heat and mass transfer mechanism which influences the system performance significantly. A numerical investigation is carried out using computational fluid dynamics (CFD) code, Fluent, in order to visualize the flow pattern and the different operational parameters distribution during the absorption process. The simulation process leads to the determination of the average heat transfer coefficient over the tube surface and also the determination of the mass transfer rate on the interface between water vapor and the lithium bromide solution.