

Modelling and Simulation of the Freezing Systems and Heat Pumps Using Unisim® Design

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Abstract : The paper describes the modeling and simulation of the heat pumps domain processes. The main objective of the study is the use of the heat pump in propene–propane distillation processes. The modeling and simulation instrument is the Unisim^{®} Design simulator. The paper is structured in three parts: An overview of the compressing gases, the modeling and simulation of the freezing systems, and the modeling and simulation of the heat pumps. For each of these systems, there are presented the Unisim^{®} Design simulation diagrams, the input–output system structure and the numerical results. Future studies will consider modeling and simulation of the propene–propane distillation process with heat pump.

Keywords : distillation, heat pump, simulation, unisim design

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