

Energy requirements estimation in DCMD process for desalination

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Membrane distillation (MD) as an emerging technology in desalination processes is studied extensively nowadays. It can be both classified as thermal process and membrane process.

In this study membrane characteristics are specified and not considered as variables. The vital problem of conventional thermal desalination processes like MSF and MED is high thermal energy consumptions. MD also consumes comparative quantity of thermal energy. Even though renewable energy such as solar energy and waste heat can be used as the energy sources, they are constrained by regions, climates or many other things. As a result, it is necessary to carry out overall energy analysis. Thus thermal energy requirements are minimized through appropriate heat recovery configurations and flow rates in this study.