ABSTRAK

Alat penukar panas atau *heat exchanger* yakni alat yang dipakai guna memindahkan panas antara dua ataupun lebih fluida. Koefisien perpindahan panas menyeluruh dan efektivitas *heat exchanger shell and tube* dipengaruhi oleh beberapa hal, salah satunya susunan dari *baffle* itu sendiri. Metode penelitian yang dilaksanakan ialah metode eksperimental yakni merancang dan menguji susunan *baffle heat exchanger*. Pengujian dilakukan dengan variasi kemiringan *baffle* 0^0, 15^0, 30^0, 45^0, dan 60^0. Dari hasil penelitian dapat disimpulkan bahwa kemiringan baffle sangat berdampak kepada koefisien perpindahan panas menyeluruh serta efektivitas *heat exchanger.* Koefisien perpindahan panas menyeluruh dan efektifitas tertinggi diperoleh pada baffle dengan kemiringan 0^0.

Kata kunci : kemiringan baffle, koefisien perpindahan panas, efektifitas, heat exchanger *shell and tube.*

ABSTRACT

A heat exchanger is a device used to transfer heat between two or more fluids. The overall heat transfer coefficient and the effectiveness of the shell and tube heat exchanger are influenced by several things, one of which is the composition of the baffle itself. The research method used is the experimental method, namely designing and testing the baffle heat exchanger arrangement. The tests were carried out with variations in the baffle slope of 0^0 15^0, 30^0, 45^0, and 60^0. From the results of the study, it can be concluded that the baffle slope greatly affects the overall heat transfer coefficient and the effectiveness of the heat exchanger. The highest overall heat transfer coefficient and effectiveness are obtained at baffles with a slope of 0^0.

Keywords: baffle slope, heat transfer coefficient, effectiveness, shell and tube heat exchanger.