

ABSTRACT

Heat exchangers are devices that facilitate the exchange of heat between two fluids that are at different temperatures. Heat exchanger have many different types and have different type of flow. This research explain how to analyze heat transfer coefficient and effectiveness of heat exchanger. Purpose of this research are to acquire heat transfer coefficient and effectiveness. In this research, cross flow is used with variation of distance between plates. Acquired data are hot inlet temperature, hot outlet temperature, cold inlet temperature, and cold outlet temperature. After analyze the data, the highest of heat transfer coefficient at 1,5 cm distance of plates is 1,5962 kW/m².°C and the lowest of heat transfer coefficient at 0,5 cm distance of plates is 0,7242 kW/m².°C. Meanwhile, the highest of effectiveness at 0,5 cm distance of plates is 65,5851% and the lowest of effectiveness at 1,5 cm is 61,9787%.

Keywords: temperature, cross flow, distance of plates, heat transfer coefficient, effectiveness