STUDI AIR PENDINGIN TERHADAP KINERJA REFRIGERANT 134a PADA UNIT PENGKONDISIAN UDARA DAN POMPA PEMANAS (*Air Conditioner And Heat Pump Study Unit*) Tipe 108/3D

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ABSTRACT

The purpose of this study was to determine the design of the load rate of the cooling water for testing the performance of refrigerant 134a in air conditioning units and heat pumps of type T108 / 3D, analyze the influence of the rate of cooling water to the COP as well as calculate the efficiency of the engine coolant to changes in the rate of cooling water. Research and analysis conducted in the Fluid Mechanics Laboratory Department of Mechanical Engineering University of Science and Technology Jayapura (USTJ), Jayapura (July 2014). The research method used was a laboratory experiment to get the data: temperature (T), pressure (P) and the mass flow rate of cooling water, the conclusions obtained from this study are: Q evap = 11.21 kW, RE = 130.53 kJ/kg, m_{ref} = 0.086 kg/s, W = 1.46 kW, Qc = 12.68 kW dan COP = 7.68.

Key Words : *Refrigerasi Impact (RE), Refrigerant Mass Flow Rate (m_{ref}), Compressor Work (W) and Co-efficient Of Performance (COP).*