PROTOTYPE BOILING KETUPAT TYPE OF BATCH STUDY OF HEAT TRANSFER COEFFICIENT INTO CONDENSOR

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ABSTRACT

So far for producing ketupat done using boiling system open by using a regular steamer so much heat loss occurs due to his high consumption of fuel, to reduce the fuel consumption of the writers tried to make a prototype of a batch type boiling ketupat equipped with condenser.
Purpose to condensation steam in boiling water so that it does not require the addition of water.
Energy consumption in a way traditional ketupat boiling takes time for 4 hours for all processes with the same time as that of 285000 kJ/kg while using a prototype wave energy consumption i.e. batch type of 37341 kJ/kg for cooling fluid flow rate 5 lt/min, 37802 kJ/kg for cooling fluid flow rate 10 lt/min and 46100 Lt/min for the coolant flow rate 15 lt/min. Influence of flow rate of cooling fluid on the heat transfer coefficient is proportional, the greater the flow rate of cooling fluid then the greater the coefficient of heat transfer rates. This is due to the heat lost when still on the way to the condenser and heat lost due to contact between the condenser with outside air.

Keywords : *prototype, boiling, flow rate, heat transfer coefficient, ketupat*