Proses manufaktur pipa kalor lurus dengan sumbu kapiler sintered copper yang dilengkapi dengan fin = Manufacturing process of straight heat pipe with sintered copper wick equipped with fin

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Abstrak

Heat exchanger is used to transfer heat from one place to another in order to stabilize the temperature at one point and to make sure the system can be operated in optimum performance. The problem nowadays is the methods of manufacturing heat pipe are still in lack of efficiency. Heat pipe manufacturing processes used in this research are sintering process, end cap sealing system, vacuum filling system, grinding, and finishing. While the main manufacturing process for fin is punching system (for outer dimension and knitting system). The results of this research using FLIR Thermal Imagine has clearly show that heat pipe which researcher manufactured has temperature difference equal to 18.1 C and thermal conductivity in amount of 2997.58 W/m-K. Aluminum fin has been manufactured and has capability of heat transfer rate up to 279.75 Joule per second.