

STABILITAS POLA ALIRAN SISTEM GAS LIQUID DALAM MICROCHANNEL BERPENAMPANG CIRCULAR DAN TRIANGULAR

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Abstract

The aim of this research is to investigate the flow pattern in the channel type T and Y for gas - liquid system. The influence of gas and liquid rate was determined for two different sections namely circular and triangular, hydrodynamics parameter for gas-liquid system in terms of length of bubble and slug was also studied for two different channels configuration for the rate of air 0.75 mL/min and water rate about 0.3 mL/min. The visualization of flow pattern was done by contacting the air and water and the flow pattern was observed using digital camera and characterized utilizing computer program. The result shows that the flow pattern in the channel T and Y foollows slug type. Length of bubble and slug was influenced by contacting pattern for system gas-liquid (channel T and Y), gas rate and liquid rate. The section form did not indicate significant influence on flow pattern in the channel. Channel type Y tends to produce constant length of bubble through the experiment. Rate of bubblef fluctuated at certain period and amplitudo. Channel Y resulted more stabil in terms of rate fluctuation compared to channel type T.

Keywords: flow pattern, channel, circular, triangular