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ANALISIS PERBANDINGAN KARAKTERISTIK ALIRAN TERADAP NILAI KEKASARAN PIPA YANG BERBEDA

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Abstract: In a flow that passes through a system or pipe installation, a flow resistance occurs. Such bottlenecks are caused by the form factors of the installation. This resistance can cause a decrease in energy from the fluid which is often called a pressure loss (head loss) or pressure drop (pressure drop) caused by the influence of fluid friction (ftiction losses) and changes in flow patterns. Under laminar flow conditions, the frictional resistance is only affected by the viscosity of the fluid. So the purpose of the study is to analyze the flow characteristics of the roughness value in pvc pipes and to analyze the flow characteristics of the roughness value in pp-r pipes, first calculate the Reynolds number with the Reynoold equation, second calculate the energy loss with the Darcy equation, third calculate the speed of water flowing in the pipe with the Bernoulli equation, fourth calculate the cross-sectional area of the pipe with a circle formula so that the results of the study show that the characteristic in PVC pipe with the largest value Froude number = 0.315 is subcritical flow and the smallest Froude number = 0.090 is subcritical flow and characteristical in PP-R pipe with the largest value Froude number = 0.297 is subcritical flow and the smallest Froude number = 0.057 is subcritical flow.

Keywords: Discharge;Fluid;Frode;Flow characteristics;Reynolds