

## Pengurangan hambatan Turbulen dengan Aditif Polimer

Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20303978&lokasi=lokal>

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### Abstrak

Since B A Tom 's found out the drag reduction phenomena, which occurs in polymer solutions in 1948 many studies, have been done for it because we can apply to the economizing energy system the phenomena. The drag reduction is the application of the turbulent modification of the flow and we can apply it for the turbulent flow region. We measured the turbulent pressure loss in the square ducts and circular pipe flow of a guar gum solution by manometer, and found that the friction factor in the ducts flow were expressed by  $Re$ . Pressure loss in ducts were measured for various concentrations of guar gum and various diameters of pipes in water to study the effect of the additive on drag reduction, It is found that guar gum acts like other drag reduction polymer additives because it constant the friction factor in laminar regime, modify the transition to turbulent flow, and reduces the friction factor the fully turbulent regime.