

ALIRAN DUA FASE MINYAK – AIR MELALUI *SUDDEN EXPANSION DAN SUDDEN CONTRACTION*

Aloysius Yuli Widiyanto

Jurusan Teknik Kimia, Fakultas Teknik, Universitas Surabaya

Abstract

The purposes of the research are learning the effect of varying fluid velocity and tap position to $(\Delta P/\rho)$, knowing the value of loss coefficients of two phase oil/water, analyzing the effect of concentration changing to the value of loss coefficients, comparing the values of loss coefficients in sudden expansion and sudden contraction from this research with the loss coefficients for one phase that is get from literature.

The main conclusions are the increase of fluid velocity and further tap position from the center of sudden expansion and sudden contraction will increase the value of $(\Delta P/\rho)$, loss coefficients in sudden expansion ranged between 0.4 - 0.65 and for sudden contraction ranged between 0.3 - 0.5. Loss coefficients in sudden expansion and sudden contraction for two phase oil/water can be approached with the one phase loss coefficients equation which get from the literature, the loss coefficients is not significantly influenced by the concentration of oil in water emulsion.

Keywords : pressure drop, sudden expansion, sudden contraction