

Abstract

In order to move gas as alternative energy source, transportation is needed. Most commonly used for pipeline transmission is by pipeline because pipeline more economical. When gas flow on transmission pipeline, from the source point and end point of flow, pressure and temperature decreased. While the pressure and temperature can affect the characteristics of the natural gas flow. For that, we need a model to predict the distribution of pressure and temperature in the pipe. In this final project will be conducted to measure the pressure drop on the pipeline transmission using fixed point iteration. Prediction of pressure distribution will be made either to the pipeline assuming the temperature of isothermal (constant) and non isothermal. Then the results of pressure and temperature drop predictions will be compared and analyzed with the data field. Based on these modeling results obtained the pressure distribution when the temperature conditions is non isothermal and with elevation changes that closest to the data field. So the error value is produced at least when compared to other conditions.

Keywords : natural gas, transmission pipeline, fixed point iteration method, pressure drop, temperature drop