Gas flow through vertical pipe and perforated vertical pipe

Abstract

In this study major and minor energy loss in vertical pipe and vertical perforated pipe were investigated. Bernoulli's principle can be derived from the principle of conservation of energy. This states that, in a steady flow, the sum of all forms of energy in a fluid along a streamline is the same at all points on that streamline. This requires the sum of kinetic energy, potential energy and internal energy remains constant. Thus an increase in the speed of the fluid – implying an increase in both its dynamic pressure and kinetic energy – occurs with a simultaneous decrease in the sum of its static pressure, potential energy and internal energy.We have developed and classified all equations of energy loss that effect on gas flow through pipe and perforated pipe. Constant uniform flow out of perforated pipe was investigate.it showed that uniform fluid distribution along the perforated pipes can be achieved by proper selection of pipe diameter, size of perforations, and spacing between perforations.