ABSTRACT

A fluid power system is defined as a means of power transmission in which a relatively incompressible fluid is used as the power transmitting media The primary purpose of fluid power system is the transfer of energy from one location to another and this energy into useful work. By this hydraulic jack is used to lift the fork. In industries this kind of fork lift can be used in order to decrease the human effort. This type of fork lift need less maintenance In order to improve design performance, shorten development cycles, reduce production cost, designed the forklift hydraulic system. By the analysis of the forklift tilting and lifting process, the forklift hydraulic system schematic is made. Based on the schematic, designed and calculated the size and operating parameter of hydraulic cylinder, the pump operating parameter, hydraulic valve operational parameter, hydraulic oil tank effective volume, pipe size, selected the appropriate hydraulic components, and checked the system pressure loss and temperature rise.