We make the pitot tube for trial purposes with the small sum diameter pitot tube type flowmeter which combines recent micro fine pressure difference sensors with the differential pressure measurement. The flow rate of the trial product and the characteristic of the differential pressure were analyzed to the range from the region of laminar flow to the turbulent regime.

Recently, the unsteady flow rate measurement is very important. In this paper, we have been confirmed the static and dynamic characteristics of laminar flow meter by experiments. Especially, we try to measure the oscillatory flow of the high frequency. As a result, we have been confirmed that this flow meter can be measured oscillatory flow up to 100[Hz].

This study deals with simulation analysis of hydraulic construction machine. In development of simulation model, the mathematical models of servo system including the dynamics equation of 2 link robot arm were employed. The dynamic parameters were estimated by system identification. The simulation results were compared with the corresponding experimental ones. As a result, we confirmed the validity of proposed method.

We have developed a pneumatically assist system for human walk who has handicap. The assist system supports the leg force by using pneumatic linear actuators when he desires to stretch his knee. This system is composed by two parts, i.e., an orthosis supported by portable actuator as source of power, and the shoes in which a weight sensor was embedded.