## *ABSTRACT*

Currently, the pneumatic and spray system is the main heart system for meeting the needs of an industry, especially in the manufacturing industry, both home appliance and automotive. The stability of the resulting pressure and high flowrate capability are the main benchmarks in an air compressed system from the need to serve industrial machines, so that it will affect the quality of product results produced from a production machine and system equipment that requires stable cooling air cooling. can reduce production defects and lost costs caused by damage to systems or equipment.

The process of controlling the compressor (air compressed unit) is carried out by analyzing the current system where the compressor load and unload system to produce pressurized water still uses a pressure sensor system located on the internal compressor and does not take into account the flow rate consumed. If there must be a pressure difference between the internal pressure of the compressor and the pressure reaching the unit in the field, which ranges from 0.2 to 0.5 bar, which varies depending on how long the pipe is and how many bends. So that there is often a drop in pressure when operating normally when there is a sudden spike in wind usage on line equipment.

Based on observations, the occurrence of pressure drop on the compressor comes from several factors including the use of the PID control system which is still less real to the needs in the field, the absence of control of flow rate consumption, the motor system still uses start-delta even though some have used an inverter but the level of responsibility it is still low, and what is equally important is the lack of monitoring & maintenance system from the PIC operator so that the compressor reliability is not optimally maintained. With controlling and monitoring based on the IOT automation system, it can make the system work optimally and efficiently.



***keywords*** *: Compressor, pressure control, flow rate,monitoring, optimal and efficient.*