

ABSTRACT

PT. Multi Instrumentasi is a manufacturing company that produces water meter. This type of water meter that produced by PT. Multi Instrumentasi has LINFLOW as trademark.

Water meter consist of four major parts, there are body casing, head casing, tube fixed coupling and nute fixed coupling. The part that produced by PT. Multi Instrumentasi are only two part, there are body casing and head casing, therefore the other two parts are obtained from supplier and can be assumed in good condition. Based on reject history date in 2014, body casing is the part that more likely to be reject. So, body casing is chosen as a research object.

In an effort to minimize defect waste, use lean six sigma methods with the steps taken following the stage of DMAI (define, measure, analyze, improve). In addition to the stage DMAI also used the tools of lean for production process improvement of body casing. In the define stage, done define SIPOC diagrams and value stream mapping for describe the production process of body casing. Measure phase, takt time calculation, and cause effect diagram. Improve phase given the proposed improvement of the results of the workload equalization based takt time, line balancing, kanban system, pull system and push system. Some proposals diebrikan namely the merger and equitable workloads, job rotation, procurement kanban cards, the determination of stock at several workstations.

Keyword: *Lean six sigma, DMAIC, waste inventory, kanban, job rotation, push system, line balancing.*