

## ABSTRACT

*PT. NAGOYA is a company engaged in industry of rubber, PVC and plastic. PT. NAGOYA producing spare parts made from rubber for the needs of movable vehicles, such as seal switches, lever seals, safety regulators, seal buttons, R3, cover nuts, water reservoir tank caps, brecket seals, rubber discs, rubber molla, rubber dumper. Among all the products produced during the research, namely the seal switch, cover nut, seal brecket and K3, cover nut has the longest lead time, which is 71 minutes. There are difference with seal brecket for 48 minutes. After further analysis, in the production process of cover nut there is a reworked activity that caused by waste defects in the cutting area as much as 86.67%. Waste defect caused by unsuitable result of cutting compound. Efforts are being made to minimize waste defects and eliminate rework activities using lean manufacturing. Creating value stream mapping (VSM) and Process Activity Mapping (PAM) to map the flow of information and the flow of the production process. Next, identify the root of waste defect using 5 whys. The problem of waste defect will be solved by improving the design of cutting tools using quality function deployment method. The result obtained from proposed design are stable cutting result caused by an automatic system so defects will be reduced and will eliminate rework activities in the cover nut production process at PT, NAGOYA so the production lead time is reduces by 8%.*

*Keywords: Lean Manufacturing, QFD Method, Waste Defect, Rework, Controller*