

Abstract

Objectives of this experiment are studying and applying the Six-Sigma method into the mig welding process of cast aluminum intercooler, the bottle-neck process in existing production line. Problem identification is shown that waste from the process is 52 percent, regarded as higher waste compare to other processes in the production line and gain most customers complaining. After analysis with cause and effect diagram in measure phase and risk priority number with FMEA method. The analysis found two significant factors effect to the problem are defect in aluminum cast tank and current in welding. The results of implementation were ensured by statistical hypothesis testing. Finally, the attribute control chart (P-chart) was applied in order to control the waste proportion, and the standardization for monitoring the process were established later. after co-operating with supplier in improvement the injection mold to solve the porosity problem, liquid metal contamination control and pouring method and finding out the proper current in welding process. The problem level of waste in mig welding of cast aluminum process is reduced to 24 percent. However, the results of this experiment can reduce time in repairing defect from two 2 operator per day to an operator per day with less customers complaining in flaw of welding joint repair.