ABSTRACT

PT XXX is a state-owned enterprise that one of the products is Air Brake System. Air Brake System is a train brake system. There are 12 components of Air Brake System produced by PT XXX. In the research, the components to be researched is Coupling Head components. Based on the company's historical data, the defective rate of Coupling Head components is 26,49%. To find out the design improvements to minimize the variation of the process that cause the defect to use the six sigma method with DMAI approach. First, the define phase, determined the product and Process requirement unfulfilled that cause problems in the smelting process, mold process, and finishing. In this study will discuss the problem in finishing process that is too deep grinding step. Second, the measure, the result is DMPO value of 6639 and the sigma level is 3.97. Thrid, analyze phase, obtained analysis of the cause of grinding process too deep that is the man factor with the cause of operator confused in determining the dimension of the component when finishing process with the root cause there aren't clue indicates Coupling Head's dimensions. Then the machines factor with the cause of inadequate castings of the Coupling Head component stable stands for the root cause there aren't Coupling Head mounting design. Fourt, improve phase, by maked improvement to minimize the emergence cause of grinding step is to deep. The improvement is make the Coupling Head component mounting apparatud equipped with a holder.

Key Words: Coupling Head component, Dimention Defect, Six Sigma (DMAIC), finishing process, tools