

Abstract

The manufacturing process of Hard Disk Drive which has a control contaminate process faced with a problem that the number of dust particles was greater than its predefined standard. The number of dust particles included the dust particles that are larger than 0.3 microns. The research applied quality tools to obtain means to reduce the number of dust particles in the process. After collecting data by using check sheets and analyzing the data by using Pareto charts, it was found that three processes, which were Latch Assembly, Media Assembly, and HSA & Magnet Assembly, were the causes of the problem. Hence, Fish Born Diagrams were utilized and they were found that the causes of having a high number of dust particles were 1) inappropriate cleaning method 2) loosen air tube at a connected joint 3) inappropriate joint connection and 4) inappropriate air tube storage and uncorrected installing air tube. Based on these causes, two methods were proposed to solve the problem. They were 1) Designing an appropriate cleaning method, and 2) Inspecting and modifying the air tube to a workable condition. After applying these methods, the number of dust particles was reduced. The target was set to 1,207 alarms per month. The results showed that there were 784 alarms in the first month and 534 alarms in the second month respectively.