Abstract

To reduce the defective rate of voice coil motor process, the six sigma approach was used in this research. Voice coil motor is a significant part of hard disk drive. Five processes of six sigma approach or DMAIC were applied. In the D (Define) process, it was found that bonding process gave the lowest yield. The main problem of the low yield was loctite contam which accounts for 85.69% of the total defective units. The M (Measure) process showed that all measures of the system in this manufacture process were reliable. In the A (Analyze) process, it was found that loctite dropping in assembled parts was the main cause for the problem. For the I (Improve) process, the design of experiment was utilized. The result showed that reducing the probe size to 1.5 mm. and increasing the number of probes to 9 would increase the yield. The total of Loctite contam has been decreased to 32.14% of the total defective units. During the C (Control) process, data collection had been done for 1 month. The result showed a significant decrease of defective units. Moreover, process yield was increased from 99.90% to 99.98% which is higher than the setting target.