

Abstract

High production cost may come from the wastes in production process such as waste from waiting times, waste from transportation and handling and useless motions. The objective of this research is to reduce the waste in 2.5 inch hard disk drive production process. The studied factory has improper production line planning, redundant producing steps and unnecessary product movements. This research proposes three plant layout options using ECRS principle and plant layout analysis. The first proposal is to combine load/unload and tester stations together. The second proposal is to combine load/unload, tester and printer stations. The last option recommended combining load/unload station with the tester station and changing the printer station to an automatic system. From the analysis, it is found that the last option has the highest investment. The second option will make machine repairment more difficult due to the obstacle of the layout. Thus, the best solution is the first option. The results show that using the first option, the transportation can be reduced from 179 to 118 meters or 34 percent. The process lead time can be reduced from 551.63 to 388.92 minutes or 23.98 percent. The number of operators can be reduced from 10 to 4 persons. If the machine stations can not be rearranged, the ECRS principle should be used combine with the man-machine chart to achieve better improvement.