## *Abstract*

*PT. Sipatex is one of the companies located in Majalaya, Bandung thas is engaged in textile industry. PT.Sipatex using some kind of machine, one of the machine used is machine Jet-Dyeing. Number of Jet-Dyeing at this company are 17 machines. Jet-Dyeing machine is a machine that serves as a conduit dye color to the fabric. This machine has an important role in the production process in PT.Sipatex and have high downtime that is cause big costs, and therefore the determination of the age, maintenance crew and the number of machines is a an important thing to reduce the life cycle cost of the engine.*

*This research will involve several methods such as FMECA that is used to establish the Generic Maintenance Strategy in which to establish Generic Strategy Maintetance first need to analyzed failure modes that exist on each machine, the cause of the failure and the effect on the engine. So it can be determined critical level of sub-systems. Then sought preventive maintenance cost on the machine which will then be used in the LCC (Life Cycle Cost). Optimal preventive maintenance cost that can be achieved Jet-Dyeing machines is Rp 276.269.368.37. Through generic maintenance treatment strategy can be determined scheduling and maintenance activities that can be done on a regular basis so as to merngurangi rate of engine failure. With the reduction of the rate of decay life cycle costs will also be reduced.*

*Methods of LCC (Life Cycle Cost) is used to find the optimal number of machines, the optimal amount of maintenance crew, engine life so that it can be seen that the optimal life cycle cost of the most optimum. Life cycle cost is in 11 years* Rp 19,389,260,637.12.



*Keywords: FMECA (Failure Modes Effects and Criticality Analysis) Maintetance Generic Strategy, LCC (Life Cycle Cost).*