

## **ABSTRACT**

*CV XYZ is a company producing spare parts of the shockbreaker that is spring guide. The machine used CV XYZ to manufacture the spare part is the Plastic Injection machine. Plastic Injection machine has an important role in the processing of plastic pellets polypropylene into a spring guide that supports the business processes in CV XYZ, if the engine is damaged then the production process will stop and will be cause any harm. To be able to keep or restore the machine to continue to operate in accordance with its function then it can be done the activities of the maintenance by the company. The method of maintenance used in this study is a Risk Based Maintenance (RBM) and Replacement Analysis. Methods of Risk Based Maintenance (RBM) is used to determine the value of the risk of failure of the Plastic Injection machine received by the company. Based on the methods of Risk Based Maintenance obtained risk value of Rp 439,313,212. The method of Replacement Analysis is used to determine the policy of when the Plastic Injection machine to do the replacement and the economic life of the machine. Based on the method of Replacement Analysis obtained policy the time of replacement and the economic life of the Plastic Injection machine is 8 years old again.*

*Keywords: Plastic Injection Machine, Maintenance, Risk Based Maintenance, Replacement Analysis*