ABSTRACT

The maintenance of machine production is the important matter which should be planned and executed by company to ensure the production process fluency. Machine which operated in the certain time will be degraded at its performance, hence if the machine often have the damage will cause the production goals is not reach, this matter occured in the Synthesis Section of Unit Urea PT. Petrokimia Gresik.

The planning of maintenance strategy at this research based on the data of downtime of especial failure cause machine used to determine the level of machine reliability by statistical analysis to the downtime of machine data. The planning of maintenance strategy by using simulation method. Simulation represent a technique to imitate the process that exist in field or in fact in the model. Simulation in this research use the software Extend.

To minimize the failure in production process, conducted experiment by modification model the simulation with applying influence level of reliability by preventive maintenance of every machine into simulation model. From the result of simulation process, we obtained the effective of maintenance time interval about 150 hours and production increased about 12.25%.

Keyword : downtime, simulation, level of reliability, maintenance strategy, preventive maintenance.