

## **ABSTRACT**

# **MAINTENANCE POLICY PROPOSAL ON BARMAG FK6800 MACHINE IN FT3 PT XYZ USING RELIABILITY-CENTERED MAINTENANCE AND RISK-BASED MAINTENANCE METHOD**

By:

Irsalina Maharani

SID: 1102130151

(Study Program: Industrial Engineering)

*PT XYZ is a company that is engaged in textile industry since 1974. PT XYZ has some different kind of yarn which through several processes that happen 24 hours a day to fulfill the demand. Maintenance task should be done so the machine will keep working optimally. But the downtime of those machine is still high in PT XYZ, so preventive maintenance are made to increase the machine reliability by using Reliability-Centered Maintenance and Risk-Based Maintenance method to know the risk value. By RCM method, Failure Mode and Effect Analysis is used for knowing the kind of machine failures. Then decision of preventive task is using RCM Decision Diagram. The result of this analysis is preventive task of every critical component and those cost. After doing the calculation, there are 18 Scheduled Discard Task and 6 Scheduled on Condition Task. Time interval of the repair are different depend on type of task and component. The repair cost in a year is Rp 2.034.867.840 for preventive maintenance task. By RBM method, failure scene is done in six component. Those six critical component are counted by the System Performance Loss value. Value of System Performance Loss times with the failure probability and the output is the risk value of every component. So the risk value if preventive task is not doing is Rp 269.768.775.*

*Key word: Preventive Maintenance, Reliability-Centered Maintenance, Risk-Based Maintenance*