ABSTRACT

Perum Jasa Tirta II (PJT II) is a company that manages hydro power plant in Jatiluhur, West Java, Indonesia.. PJT II have 6 units hydro power plant with capacity up to 187 MW. The amount of electricity generated always change every year. It happens because the units often to breakdown, thus makes the high downtime. High amount of downtime makes the amount of electricity generated decreases and makes impact to income of company. Maintenance policy have already doing by PJT II became three type, preventive maintenance, corrective maintenance and overhaul. Although the company uses maintenance policy, the numbers of breakdowns are still high, so the company needs to choose the effective and efficient maintenance policy based on characteristics machine and maintenance time interval.

Reliability Centered Maintenance II method is used in order to choosing the effective and efficient maintenance policy. First, the critical systems are selected from the turbine system using risk matrix. The selected critical systems are governor system and cooler system. Next step is choosing the maintenance policy using Reliability Centered Maintenance II method

Based on data processing using RCM II, 5 policies were made for subsystem/component for governor system and cooler system that include scheduled on condition, scheduled restoration, scheduled discard, failure finding dan run to failure. 17 components are on scheduled on condition task policy, 14 components are on scheduled discard task policy, 10 components are on scheduled failure finding task policy, 4 components are on run to failure task policy, and 2 components are on scheduled restoration task policy. Maintenance interval task for every components are determined based on selected characteristic of damage and parameter distribution.

***Keywords** : RCM II, Risk Matrix, Maintenance Interval, Downtime, Maintenance Policy*