

SUMMARY

Andika Angger Nugraha , Department of Mechanical Engineering , Faculty of Engineering, Brawijaya University , May 2016 , Application of Reliability Centered Maintenance (RCM) On Generator Cooler Component Care Planning in Water Cooling System at PT . PJB UP Brantas PLTA Sengguruh , Supervisor : Rudianto Raharjo and Widya Wijayanti .

PT . PJB (Generating Java Bali) UP Karangates is one company that plays an important role in distributing electricity at the area of Java and Bali . In the production process, the electricity generated from power plants (hydropower) which comes from the Sengguruh Dam . In the process of fulfilling the demand for electricity is expected no disruption happened . One of the supporting units in fulfilling the needs of electricity in the powerplant is Water Cooling System Unit. Disruption would potentially hinder the performance of other machines and can pose a threat to the safety in the work environment and disruption to operational capability which in this case is the production of electric supply.

Based on the frequent level of damage occurrence to the Water Cooling System Unit , then obtained three components of concern in research that is radiator pipe , radiator sensor , and drain and venting valve. The method that will be used in this research is using Reliability Centered Maintenance (RCM) . Where this method is applied for planning maintenance activities which is accordance with the functions and systems (components) through analysis of the impact caused by a failure by using FMEA table and RCM Decision Diagram .

From the results obtained , the priority maintenance activities that can be performed on each of the critical components from Water Cooling System Unit is Scheduled On-Condition Task and Scheduled Discard Task

Keywords : Water Cooling System , Reliability Centered Maintenance (RCM) , Failure Mode Effects and Analysis (FMEA) , RCM Decision Diagram , Maintenance Interval