

ABSTRACT

Maintenance is an important activity undertaken to maintain or improve the function of equipment in order to work optimally. One of the factors that support the maintenance activities is spare part availability. Spare parts that are always available will reduce downtime when the system shutdown due to damaged components, and will also avoid stock out losses. The manual calculation process for RCM & RCS analysis, and probabilistic inventory models have very long steps, so equipment in large quantities will take more time. Maintenance analysts need to use more than one existing application as work tools. Therefore, a web-based application with more features that can be used to analyze RCM, RCS, and probabilistic inventory models is developed. This application will simplify the process of calculation, analysis, and results management, so it will helps maintenance analysts in doing their work. This application can determine the maintenance policy, spare part requirement and inventory policy accurately because it has passed the verification test with the accuracy level above 95%.

Keywords : Web-based application, maintenance, RCM, RCS, probabilistic inventory model