

ABSTRACT

PT ULS is a textile company that produces rolls of yarn by using Murata 310A machine. The Murata 310A is a twist for one machine that used to twine the thread into one piece. Downtime to the component on the machine will affect the production because at the downtime, the machine is stopped for repair. Determination of critical components is done with Risk Priority Number (RPN). Once a critical component is obtained, it then determines the criticality part of the critical component by using Reliability Centred Spares (RCS). The number of spare requirements can also be determined using Poisson Process. Then from Poisson Process result the number of spare requirement for 12 months can be known. Then by Maintenance Value Stream Map (MVSM) method is used to mapping of repair activity from gear end box and analyzed value added and non value added activity. From the mapping, improvement activities are categorized into Time To Organizw (TTO), Time To Repair (TTR), and Time To Yield (TTY). This research uses cause and effect diagram dan 5S principles to analyze the improvement activity. The cause if inadequate repair activity is due to several factors such as machinery, man, materials, environment, and method. The next mapping is made with future state map, and the efficiency increases from 23.81% to 30%.

Keywords: Risk Priority Number, Reliability Centred Spares, Poisson Process, Maintenance Value Stream Map