

ABSTRACT

PT INKOASKU is a leading company dedicated to steel wheel rim manufacture for passenger car and pick up or minibus which has more than 50 production machine as the company's physical assets. One of those production machines is Flash Butt Welding (FBW) that serves to weld both sides of the material with 3 critical steps called Preheat-Flashing-Upsetting. In order to fulfill its function in operating activities, FBW should be maintained properly by the company. So far, FBW is maintained by performing the scheduled maintenance activities which are expected to eliminate potential failures that may occur. In order to improve maintenance performances, the Reliability Centered Maintenance (RCM) is selected as the method to determine the appropriate maintenance actions for each component of the machine. The analysis has 3 sub-methods which are FBD to analyze machining flow process; FMEA to analyze the function, functional failures, failure modes, and failure effects; also LTA to analyze functional failure consequences. The analysis has categorized the best preventive maintenance actions such as 12 components are categorized as Scheduled On-Condition Task, 3 components are categorized as Failure Finding Task, etc. Analyzing the reliability by calculating the value of MTTF and MTTR for each component is done to complete this study. The final result of the study provides 23 proposed actions along with the maintenance schedule for 2016 as an improvement of maintenance performances.

Keywords : RCM, FBD, FMEA, Reliability