ABSTRACT

PT XYZ is a company engaged in manufacturing. One of the products produced is dies, where the production process is carried out according to customer requests. In carrying out the production process, the company experienced obstacles in the form of delays in the production process. One of the factors causing these problems is the frequency of machine breakdowns that result in downtime, thus hampering the production process and the production target is not achieved. Based on the data owned by the company, the highest frequency of machine breakdown occurs in Kasuga CNC machines. To determine the effectiveness of the machine, the Overall Equipment Effectiveness (OEE) method was used and added the Overall Resource Effectiveness (ORE) variable to determine the effectiveness of the machine from the aspect of its resources. The results showed that the average OEE value of Kasuga CNC machines was 45.45%, which is still below the world class standard of 85%. While the ORE value of the Kasuga CNC machine is 41.79%. The biggest causes of losses from the low effectiveness of Kasuga CNC machines are reduced speed losses and idling and minor stoppage factors. Next is the design of a total productive maintenance (TPM) based machine maintenance system.

Keywords: Overall Equipment Effectiveness (OEE), Overall Resource Effectiveness (ORE), Six Big Losses, Total Productive Maintenance (TPM)