

ABSTRACT

PT Semen Tonasa is the largest cement producer in Eastern Indonesia, located in Pangkep Regency, South Sulawesi Province. Based on the realization data and the RKAP of PT Semen Tonasa's cement production, in 2021 it can be seen that the production volume of the 4.20 finish mill machine was unable to reach the planned target, one of which was due to frequent downtime. This causes the effectiveness of the machine is not optimal. The method used to calculate the level of machine effectiveness is using the Overall Equipment Effectiveness (OEE) and Overall Resource Equipment (ORE) methods with the aim of calculating the machine's effectiveness level considering resources such as equipment, operators, floor management, and support systems. Based on these calculations, the OEE and ORE values on the finish mill machine 4.20 from January 2021 – December 2021 are 77.36% and 50.40%, this shows that the OEE and ORE values are still below the World Class Manufacturing OEE's Standard, namely by 85%. The analysis of six major losses is then used to determine the biggest loss factor from the effectiveness value of the finish mill machine 4.20, there are two most influential factors, namely idle and minor stoppage of 52.40% and speed reduction of 31.13%. To overcome problems related to the low effectiveness value of the 4.20 finish mill machine, two pillars of Total Productive Maintenance (TPM) are applied, namely the pillars of planned maintenance and autonomous maintenance. The implementation of the planned maintenance pillar aims to identify basic equipment or machine problems, achieve and maintain machine availability, optimize maintenance costs, improve machine maintenance and capability, zero failure and damage, and always ensure spare parts availability is carried out. While the implementation of the autonomous maintenance pillar is designed to empower and develop operators to be able to handle small maintenance tasks so that operators are responsible for equipment maintenance to prevent maintenance machines.

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