

ABSTRAK

PENERAPAN TOTAL PRODUCTIVE MAINTENANCE (TPM) DENGAN PENDEKATAN *OVERALL EQUIPMENT EFFECTIVENESS* (OEE) DAN SIX BIG LOSSES UNTUK MENINGKATKAN KINERJA MESIN VERTICAL ROLL MILL (Studi Kasus : PT. Magnesium Gosari Internasional)

PT MGI merupakan perusahaan yang menghasilkan pupuk dolomit, mengalami masalah pada mesin *Vertical Roller Mill* yang berperan penting dalam sistem produksi pupuk, memiliki tingkat *downtime* tinggi sehingga mengganggu proses produksi dan tidak tercapainya target produksi. Maka dari itu perlu adanya analisis mengenai tingkat efektivitas mesin yang bertujuan mengetahui kinerja produksi dan mengidentifikasi terhadap permasalahan yang terjadi dan faktor – faktor terjadinya permasalahan sehingga usaha perbaikan terfokus dengan metode *Overall Equipment Analysis* (OEE) dan FMEA. Hasil penelitian didapatkan rata – rata nilai OEE pada mesin *Vertical Roller Mill* sebesar 82,87%, sedangkan mesin yang memenuhi standart JIPM sebesar $\geq 85\%$ untuk mencapai mesin yang ideal. Faktor *six big losses* yang mempengaruhi adalah *equipment failure losses* sebesar 63%, *reduce speed losses* sebesar 15%. Sehingga memprioritaskan rekomendasi perbaikannya adalah Bearing rusak, *Seal* aus/meleleh guna menurunkan nilai *equipment failure losses*, dan Cekungan pada *grinding table*, Kerusakan pada *grinding roller* guna menurunkan nilai *reduce speed losses* yang tinggi. Serta operator mesin dan *staff maintenance* secara bersama – sama menjaga, memelihara dan merawat mesin serta peralatan guna meningkatkan efektivitas mesin dan mengurangi *losses* yang menyebabkan nilai OEE mesin VRM rendah.

Kata Kunci : *Overall Equipment Analysis* (OEE), *Six Big Losses*, FMEA, *Downtime*.

ABSTRACT

IMPLEMENTATION OF TOTAL PRODUCTIVE MAINTENANCE (TPM) WITH OVERALL EQUIPMENT EFFECTIVENESS (OEE) AND SIX BIG LOSSES APPROACH TO INCREASE PERFORMANCE OF VERTICAL ROLL MILL MACHINERY (Case Study: PT. Magnesium Gosari Internasional)

PT MGI is a company that produces dolomite fertilizer, experiencing problems on the Vertical Roller Mill which plays an important role in the fertilizer production system, has a high level downtime so that it disrupts the production process and does not achieve production targets. Therefore, there is a need for an analysis of the level of machine effectiveness that aims to determine production performance and identify the problems that occur and the factors that occur so that improvement efforts are focused on the Overall Equipment Analysis (OEE) and FMEA. The results showed that the average OEE value on the Vertical Roller Mill was 82.87%. while the machine that meets the JIPM standard is 85% to achieve the ideal machine. The six big losses that influence are equipment failure losses by 63%, reduce speed losses by 15%. So that the priority recommendations for repairs are damaged bearings, thirst/melt seals to reduce the value of equipment failure losses, and Basins on grinding tables, damage to the grinding roller to reduce the high value of reduce speed losses . As well as machine operators and maintenance staff jointly maintain, maintain and care for machines and equipment in order to increase machine effectiveness and reduce losses that cause low VRM machine OEE values.

Keywords : Overall Equipment Analysis (OEE), Six Big Losses, FMEA, Downtime.