ABSTRAK

Evaluasi Efektifitas Mesin Rim Line-1 Dengan Penerapan Total Productive Maintenance (TPM) Di PT. Inkoasku

PT. Inkoasku selaku perusahaan yang bergerak di bidang industri *Wheel Rim Manufacturer* juga tidak terlepas dari masalah yang berkaitan dengan efektivitas mesin/peralatan yang diakibatkan oleh *six big losses*. Hal ini dapat terlihat dengan frekuensi kerusakan yang terjadi pada mesin/peralatan sehingga target produksi tidak tercapai. Oleh karena itulah diperlukan langkah-langkah yang efektif dan efisien dalam pemeliharaan mesin/peralatan untuk dapat menanggulangi dan mencegah masalah tersebut. Salah satu strategi yang diperlukan adalah menerapkan *Total Productive Maintenance* (TPM) dengan menggunakan tolak ukur *Overall Equipment Effectiveness* (OEE).

Tujuan TPM adalah untuk mengetahui *six big losses* yang terdapat pada mesin produksi, sedangkan *Overall Equipment Effectiveness* (OEE) digunakan sebagai alat ukur dalam penerapan TPM di PT.Inkoasku akan sangat berguna jika dilakukan pengumpulan dan perhitungan secara reguler akan memberikan petunjuk yang jelas untuk *improvement.* Objek yang diteliti adalah mesin *flash butt welding* yang berada di stasiun *rim line-1* diambil dari periode Januari sampai Desember 2012. Analisa mesin *flash butt welding* ini diukur melalui *availability, performance efficiency* dan *rate of quality product.*

Hasil penelitian menunjukkan bahwa faktor tertinggi yang mempengaruhi efektivitas mesin *flash butt welding* yaitu *set-up and adjustment loss* dan *breakdown loss*, hal ini mengakibatkan kinerja mesin turun, tingkat menganggur mesin tinggi serta produktivitas rendah. Nilai *Overall Equipment Effectiveness* (OEE) mesin *flash butt welding* periode Januari sampai Desember 2012 dengan nilai rata-rata 81.61% dengan kisaran OEE antara 78.69% sampai 83.78%, *Availability Ratio* berkisar antara 90,1% - 95,0%, *Performance Efficiency Ratio* yang berkisar antara 88,07% - 93,27%, Dan hasil *Rate of Quality Products Ratio* yang berkisar antara 97.03% - 98.67%.

Kata Kunci : *Six Big Losses, Total Productive Maintenance, Overall Equipment Effectiveness, Improvement.*

ABSTRACT

Effectiveness Evaluation of Machine Rim Line-1 By Application of Total Productive Maintenance (TPM) at PT. Inkoasku

PT. Inkoasku as a company engaged in manufacturing Wheel Rim Manufacturer can not be separated from issues related to the effectiveness of the machinery / equipment caused by the six big losses. This can be seen by the frequency of damage to machinery / equipment so that production targets are not achieved. Hence, the necessary measures are effective and efficient in the maintenance of machinery / equipment to be able to cope with and prevent such problems. One strategy that is needed is to implement Total Productive Maintenance (TPM) using benchmark Overall Equipment Effectiveness (OEE).

TPM goal is to know that there are six big losses on the production machine, while the Overall Equipment Effectiveness (OEE) is used as a measuring tool in the implementation of TPM in PT.Inkoasku would be very useful if done regularly gathering and calculations will provide clear guidance for improvement. The object under study is flash butt welding machine which is in line rim station-1 is taken from the period of January to December 2012. Analysis flash butt welding machine is measured by the availability, performance efficiency and rate of quality product.

The results showed that the highest factors that influence the effectiveness of flash butt welding machine is set-up and adjustment loss and loss breakdown, this has resulted in the performance of the engine down, engine idle high level and low productivity. Top Overall Equipment Effectiveness (OEE) flash butt welding machine from January to December 2012 with an average value of 81.61% with a range between 78.69% OEE to 83.78%, Availability Ratio ranged from 90.1% - 95.0%, Performance Efficiency Ratio which ranged between 88,07% - 93,27%, and the results of Ratio Rate of Quality Products in the range of 97.03% - 98.67%.

Key word: ***Six Big Losses, Total Productive Maintenance, Overall Equipment Effectiveness, Improvement.***