

ABSTRAK

Kunci kesuksesan dari setiap *manufacturing optimization strategies* adalah mesin yang andal, salah satu metode mengukur tingkat keberhasilan penerapan TPM adalah melalui pengukuran nilai *Overall Equipment Effectiveness (OEE)*.

PT. XYZ adalah perusahaan berbasis global dan pemimpin dalam bisnis mainan. PT. XYZ beroperasi sebagai produsen boneka terbesar dan mempekerjakan sekitar 6000 orang di Indonesia. Salah satu hambatan yang dihadapi pada proses produksi perusahaan adalah tingginya *downtime* pada lini produksi *Spray Machine*, dengan rata-rata *downtime* yang terjadi pada periode 18 September – 30 Oktober 2018 sebesar 173.84 menit/hari, jauh melebihi target *downtime* yang direncanakan yaitu sebesar 75 menit/hari.

Secara rata-rata, pencapaian OEE dari *Spray Machine* selama periode 18 September – 30 Oktober 2018 hanya sebesar 56%, dengan masing-masing nilai rata-rata *Availability*, *Performance* dan *Quality* sebesar 78%, 73% dan 97%. Pencapaian ini tidak memenuhi standar kondisi ideal peralatan OEE kelas dunia yaitu sebesar 85 %. Lalu diketahui juga bahwa *Reduce Speed Losses* merupakan *losses* tertinggi *spray machine* periode 18 September – 30 Oktober 2018 yang menyebabkan rendahnya efektivitas *spray machine*, *downtime* yang disebabkan oleh *Machine Breakdown* mempengaruhi kinerja mesin dan menyebabkan kecepatan mesin untuk dapat menghasilkan output menjadi rendah/berkurang (*Reduce Speed Losses*). Didapatkan pula *corrective action* untuk menangani masalah komponen yang menyebabkan *Machine Breakdown* dari penerapan metode *Failure Mode Effect and Critical Analysis (FMECA)*.

Dari hasil implementasi *corrective action* pada *Auto Spray Kaizen Meeting and Training* didapatkan nilai OEE periode 12 November – 20 November 2018 meningkat dengan nilai rata-rata 74%.

Kata Kunci: *Downtime, Overall Equipment Effectiveness (OEE), Losses, Corrective action, Failure Mode Effect and Critical Analysis (FMECA)*

ABSTRACT

The key to success of any manufacturing optimization strategies is a reliable engine, one method of measuring the success rate of implementing TPM is through measuring Overall Equipment Effectiveness (OEE).

PT. XYZ is a global based company and a leader in the toy business. PT. XYZ operates as the largest doll manufacturer and employs around 6000 people in Indonesia. One of the obstacles faced in the company's production process is the high downtime on the Spray Machine production line, with an average downtime occurring in the period 18 September - 30 October 2018 amounting to 173.84 minutes / day, far exceeding the planned downtime target of 75 minutes / day.

On average, the achievement of OEE from Spray Machine for the period 18 September - 30 October 2018 is only 56%, with each Availability, Performance and Quality average value being 78%, 73% and 97%. This achievement does not meet the standards of ideal conditions for world-class OEE equipment at 85%. Then it was also known that Reduce Speed Losses were the highest losses of spray machines for the period 18 September - 30 October 2018 which caused the low effectiveness of spray machines, downtime caused by Machine Breakdown affected engine performance and caused the engine speed to produce low / reduced output (Reduce Speed Losses). Corrective action is also obtained to deal with component problems that cause Machine Breakdown from applying the Failure Mode Effect and Critical Analysis (FMECA) method.

From the results of the implementation of corrective action on the Auto Spray Kaizen Meeting and Training, the OEE value for the period of November 12 - November 20 2018 increased with an average value of 74%.

Keywords: Downtime, Overall Equipment Effectiveness (OEE), Losses, Corrective action, Failure Mode Effect and Critical Analysis (FMECA)