

ABSTRAK

PT YKK Zipco Indonesia adalah perusahaan manufaktur yang memproduksi komponen ritsleting (*zipper*) yaitu *chain* dan *slider*. Pembuatan produk *slider* melalui beberapa departemen yaitu *die casting*, *assembling*, *painting*, dan *plating*. Proses pembuatan produk *slider* berawal dari departemen *die casting* yang melakukan proses produksi menggunakan 17 mesin. Permasalahan yang ada pada departemen *die casting* adalah tingkat produktivitas yang cukup rendah sehingga diperlukan analisis terhadap efektivitas mesin *die casting*. Untuk mengatasi masalah tersebut diperlukan langkah-langkah yang tepat dalam perawatan mesin, salah satunya dengan melakukan penerapan *Total Productive Maintenance* (TPM). Penelitian dimulai dengan mengukur tingkat efektivitas mesin *die casting* dengan menggunakan metode *Overall Equipment Effectiveness* (OEE) serta dilanjutkan dengan perhitungan *Six Big Losses* untuk mengetahui kerugian (*losses*). Setelah itu dicari akar penyebab permasalahan menggunakan *Pareto Diagram* dan *Fishbone Diagram*. Hasil OEE pada mesin *die casting* C-07 selama periode penelitian yaitu dari bulan September 2021 sampai Februari 2022 adalah sebesar 78,6% yang tergolong dalam kategori sedang menurut *world class* standar OEE. Faktor yang paling mempengaruhi nilai OEE menjadi rendah adalah *breakdown losses*, *reduced speed losses*, dan *set up & adjustment losses*. Rekomendasi perbaikan untuk mengatasi permasalahan tersebut adalah dengan menerapkan pilar TPM yaitu, *planned maintenance*, *autonomous maintenance*, *training and education*, dan *safety, health and environment*.

Kata kunci: *Total Productive Maintenance, Overall Equipment Effectiveness, Six Big Losses, Pareto Diagram, Fishbone Diagram*

ABSTRACT

PT YKK Zipco Indonesia is a manufacturing company that produces zipper components, such as chains and sliders. The manufacture of slider products through several departments, including die casting, assembling, painting, and plating. The process of making sliders products starts from die casting department which carries out the production process using 17 machines. The problem in die casting department is that the productivity level is quite low, so an analysis of die casting machine effectiveness is needed. To solve this problem, proper steps are needed in machine maintenance, one of the solutions steps is by implementing Total Productive Maintenance (TPM). The study began by measuring the effectiveness of the die casting machine using the Overall Equipment Effectiveness (OEE) method and continued with the calculation of the Six Big Losses to determine losses. After that, look for the root cause of the problem using Pareto Diagrams and Fishbone Diagrams. The OEE results on the C-07 die casting machine during the study period from September 2021 to February 2022, were 78,6% which was classified as medium category according to world class OEE standards. The factors that most affect the low OEE value are breakdown losses, reduced speed losses, and set up & adjustment losses. Recommendations for improvement to solve these problems are by implementating the TPM pillars, such as planned maintenance, autonomous maintenance, training and education, and safety, health and envorinment.

Keywords: *Total Productive Maintenance, Overall Equipment Effectiveness, Six Big Losses, Pareto Diagram, Fishbone Diagram*

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