ANALISA PROSES PRODUKSI KAIN SARUNG DI PT. P DENGAN MELAKUKAN PENDEKATAN *LEAN MANUFACTURING*.

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ABSTRAK

Dalam era globalisasi dunia dan perdagangan yang bebas seperti sekarang, perindustrian di Indonesia mengalami perkembangan yang cukup signifikan. Menurut buku Analisis Perkembangan Industri Indonesia Edisi I-2020, industri tekstil mengalami kenaikan pada tahun 2017 hingga 2019. Hal ini memicu berbagai persaingan industri yang semakin ketat dimana dibutuhkan layanan yang baik supaya nama perusahaan tetap terjaga di lapangan. PT. P adalah satu dari sekian banyak perusahaan manufaktur yang memproduksi kain sarung. Berdasarkan observasi dan kuesioner *seven waste* masih terdapat pemborosan yang berpotensi menimbulkan kerugian, oleh karena itu perlu adanya perbaikan pada kegiatan yang berpotensi menimbulkan *waste*. Tujuan dari penelitian ini yaitu memberikan rekomendasi perbaikan untuk meminimalisir *waste* agar terciptanya efektivitas serta efisiensi dalam system produksi yang dijalankan dan melihat perbandingan hasil implementasi melaui *software* ProModel. Hasil menunjukkan terdapat 3 pemborosan terbesar yaitu transportasi, produk cacat, dan *waste of motion.* Metodologi dalam penyelesaian masalah yaitu *Value Stream Mapping, Value Stream Analysis Tools* (VALSAT), *Failure Mode Effect Analysis* (FMEA)*,* serta *Fault Tree Analysis* (FTA). Dari hasil pengolahan data didapatkan hasil penurunan *lead time* sebesar 8,82 menit efek dari perubahan *layout* dan peningkatan *output* rata-rata sebesar 342 *beam* (18,1%) dalam 1 bulan yang diketahui melalui simulasi.

Kata Kunci : *Lean Manufacturing, Value Stream Analysis Tools* (VALSAT), *Failure Mode Effect Analysis* (FMEA)*, Fault Tree Analysis,* Simulasi, Pemborosan, Pemodelan

FABRIC PRODUCTION ANALYSIS AT PT. P USING LEAN MANUFACTURING APPROACH.

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ABSTRACT

In this era of world globalization and free trade as it is now, the industry in Indonesia has experienced significant development. According to the book Analysis of Indonesia's Industrial Development Edition I-2020, the textile industry experienced an increase from 2017 to 2019. This triggered increasingly fierce industrial competition where good services were needed so that the company's name was maintained in the field. PT. P is one of the many manufacturing companies that produce sarongs. Based on observations and the seven waste questionnaires, there is still waste that has the potential to cause losses, therefore it is necessary to improve activities that have the potential to cause waste. The purpose of this study is to provide recommendations for improvement to minimize waste to create effectiveness and efficiency in the production system that is run and to see a comparison of the implementation results through the ProModel software. The results show that there are 3 biggest wastes, namely transportation, defective products, and waste of motion. Methodologies in problem solving are Value Stream Mapping, Value Stream Analysis Tools (VALSAT), Failure Mode Effect Analysis (FMEA), and Fault Tree Analysis (FTA). From the results of data processing, it was found that the lead time decreased by 8.82 minutes, the effect of layout changes, and an average output increase of 342 beams (18.1%) in 1 month which is known through simulation."

Keyword : *Lean Manufacturing, Value Stream Analysis Tools (VALSAT), Failure Mode Effect Analysis (FMEA), Fault Tree Analysis, Simulation, Waste, Modeling*