ABSTRAK

PT. TMMIN melakukan peningkatan daya saing melalui peningkatan efisiensi. Tetapi, Efisiensi di welding tidak tercapai, dari target 97%, aktual effisiensi 95,9%. Line Stop didominasi *late process* sebesar 1,7%. *Late process* adalah indikasi kuat adanya *waste*. Penelitian dilakukan menggunakan metode *Value Stream Analysis Tools* (VALSAT), ditemukan adanya 3 waste kritis, yaitu: *motion* 24,4 %, *overproduction* 18,5 % , dan *inventory* 15.8%. Dengan metode *Root Cause Analysis* (RCA) digabungkan *Failure Mode and Effect Analysis* (FMEA), didapatkanlah 4 skala prioritas *root cause*, yaitu: Sistem *assembling medium part* secara manual, Sistem *packing style part* menggunakan pallet besi, Sistem produksi big lot system dan Jumlah wadah penempatan part mencapai 800 unit. Penanggulangan yang dilakukan adalah Membuat *hanger full auto*, Merubah *packing style* dari pallet besi ke *polibox* dan *Dolly*, Merubah sisitem produksi menjadi *small lot system*, Membuat dolly common (1 dolly untuk memasang 8 varian part). Dengan membandingkan *Value Stream Mapping* kondisi sebelum dan sesudah, hasil akhirnya: Reduksi waktu kerja 178 menit, mereduksi 58 aktifitas, Sehingga dapat meningkatkan effisiensi proses pembuatan under body assy dari 95,9% menjadi 98,4%.

Kata kunci: efisiensi, *waste*, *under body*, VSM, VALSAT, FMEA

ABSTRACT

PT. TMMIN improves competitiveness by increasing efficiency. However, the efficiency in welding was not achieved, from the target of 97%, the actual efficiency was 95.9%. Line Stop is dominated by the late process by 1.7%. The late process is a strong indication of waste. The study was conducted using the Value Stream Analysis Tools (VALSAT) method, it was found that there were 3 critical wastes, namely: motion 24.4%, overproduction 18.5%, and inventory 15.8%. With the Root Cause Analysis (RCA) method combined with Failure Mode and Effect Analysis (FMEA), 4 priority root causes are obtained, namely: Manual medium part assembling system, Packing style part system using iron pallets, Big lot system production system, and Number of containers placement of parts reaches 800 units. The countermeasures are making a full auto hanger, changing the packing style from iron pallets to poly boxes and dollies, changing the production system to a small lot system, making dolly common (1 dolly to install 8 part variants). By comparing the Value Stream Mapping conditions before and after, the final result: Reduction of 178 minutes of working time, reducing 58 activities, to increase the efficiency of the underbody assembly process from 95.9% to 98.4%.

Keywords: efficiency, waste, underbody, VSM, VALSAT, FMEA