

## ABSTRAK

Perusahaan otomotif A merupakan *market share leader* dalam penjualan sepeda motor. Kunci keberhasilan perusahaan A adalah keberadaan laboratorium *material development* yang berperan melakukan inovasi pada pengembangan material sepeda motor. Dalam menjalankan *business processnya*, laboratorium A mengalami kendala yaitu adanya keterlambatan dalam penyelesaian uji tarik pada part Belt Drive. Untuk mengetahui waste yang ditimbulkan, dilakukan analisa menggunakan VSM (Value Stream Mapping). Hasil pembuatan Current Value Stream Mapping CVSM menunjukkan lead time uji tarik lebih besar dibandingkan cycle time yaitu 352,58 menit. Selanjutnya dilakukan pembobotan jenis waste dengan kuisioner, dan diperoleh *waiting* memiliki *score* terbesar. Metode PAM (Process Activity Mapping) terpilih digunakan untuk menguraikan aktivitas uji tarik, yang menunjukkan adanya non value added (NVA) sebesar 69,5 %. Kemudian dilakukan analisa penyebab masalah menggunakan fishbone, dan ditemukan tiga proses penyebab NVA yaitu input parameter setting terlalu lama (*waiting*), penggunaan sampel dummy (*excess processing*), dan retest uji tarik (*over production*). Implementasi SMED dilakukan sebagai pendekatan untuk mengurangi %Changeover pergantian setting metode uji tarik. Dan proses perubahan setting manual menjadi database recipe call berhasil mengurangi waktu changeover terakhir sekitar 68% dari sebelumnya 3 jam 09 menit 53 detik menjadi 1 jam 01 menit 16 detik. Hal tersebut juga berhasil menurunkan lead time sebesar 52,9%.

**Kata Kunci** : VSM, PAM, SMED, Uji Tarik.

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## ABSTRACT

*Automotive company A is the market share leader in motorcycle sales. The key to the success of company A is the existence of a material development laboratory that plays a role in making innovations in the development of motorcycle materials. In carrying out its business process, laboratory A encountered a problem, namely a delay in completing the tensile test on the Belt Drive part. To find out the potential waste, an analysis is carried out using VSM (Value Stream Mapping). The results of the CVSM Current Value Stream Mapping show that the lead time of the tensile test is greater than the cycle time, which is 352.58 minutes. Furthermore, the type of waste is weighted with a questionnaire, and it is obtained that waiting has the largest score. The selected PAM (Process Activity Mapping) method was used to describe the tensile test activity, which showed a non-value added (NVA) of 69.5%. Then analyzed the causes of the problem using fishbone, and found of three processes that cause NVA, namely the input parameter setting is too long (waiting), the use of dummy samples (excess processing), and retest tensile test (over production). The implementation of SMED is carried out as an approach to reduce %Changeover in the tensile test method setting. And the process of changing the manual setting into a recipe call database succeeded to reducing the last changeover time by around 68% from the previous 3 hours 09 minutes 53 seconds to 1 hour 01 minutes 16 seconds. It also managed to reduce lead time by 52.9%.*

**Keywords:** VSM, PAM, SMED, Tensile Test.

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