

# IDENTIFIKASI DAN MINIMASI WASTE DENGAN PENERAPAN *LEAN MANUFACTURING* PADA PROSES PRODUKSI CIRENG DI PT BRECXELLE BERKAH UNITI

**Firizky Tania Dwi Wanda**

## **Abstrak**

PT Brexelle Berkah Uniti merupakan salah satu pelaku industri makanan cireng yang memperhatikan secara detail proses di setiap lini produksinya. Namun, dalam proses produksi, ditemukan adanya pemborosan yang dapat menyebabkan kerugian bagi perusahaan. Berdasarkan hasil pengamatan dan kuesioner 7 *waste*, didapati 3 pemborosan yang paling dominan yaitu *waste defect*, *waiting*, dan *excessive transportation*. *Waste defect* yang terjadi seperti cireng tidak berbentuk, hancur, dan tidak lulus mesin *metal detector*. *Waste waiting* terjadi pada proses pendinginan, saat menyalakan mesin, serta sebelum dilakukan proses press. *Waste transportation* akibat adanya aliran proses yang memutar dan tidak berurutan. Penelitian ini bertujuan untuk meminimasi waktu produksi dan meningkatkan hasil produksi dengan melakukan simulasi pada proses produksi cireng PT Brexelle Berkah Uniti dengan metode *Lean Manufacturing* dan Simulasi Sistem. Berdasarkan hasil simulasi dengan perbaikan yang diusulkan, didapatkan hasil dari perhitungan dan simulasi yaitu total *lead time* produksi berkurang 657,97 detik atau 10,97 menit dari 2426,77 detik atau 40,45 menit menjadi 1768,80 detik atau 29,48 menit. Waktu NVA dan NNVA pada FVSM pun berkurang sebesar 648,53 detik atau 10,81 menit dari waktu aktivitas pada CVSM. Berdasarkan hasil simulasi, didapatkan peningkatan hasil produksi sebesar 80% setelah diusulkan perbaikan yaitu dari 4.671.945 pcs per bulan menjadi 8.429.679 pcs per bulan.

Kata Kunci : 7 *Waste*, *Lean Manufacturing*, *Value Stream Mapping*, VALSAT, *Process Activity Mapping*, 5 *Whys Analysis*, Simulasi ProModel

# **IDENTIFICATION AND MINIMIZATION OF WASTE WITH THE APPLICATION OF LEAN MANUFACTURING IN THE CIRENG PRODUCTION PROCESS AT PT BRECXELLE BERKAH UNITI**

**Firizky Tania Dwi Wanda**

## *Abstract*

PT Brexelle Berkah Uniti is one of company in the the cireng food industry who pays attention to the details of the process in each of its production lines. However, in the production process, waste is found which can cause losses to the company. Based on the results of observations and the 7 waste questionnaires, it was found that the 3 most dominant wastes were defects, waiting, and excessive transportation. Waste of defects that occur such as cireng are shapeless, destroyed, and do not pass through the metal detector machine. Waste of waiting occurs during the cooling process, when starting the engine, and waiting for the pressing process. Waste of transportation occurs due to circular and non-consecutive process flows. This research aims to minimize production time and increase production result by simulating the cireng production process of PT Brexelle Berkah Uniti using the Lean Manufacturing and System Simulation method. Based on the simulation results with the proposed improvements, the results obtained from the simulation were that the total production lead time was reduced by 657,97 seconds or 10,97 minutes from 2426.77 seconds or 40.45 minutes to 1768,80 seconds or 29,48 minutes. The NVA and NNVA time on FVSM also decreased by 648,53 seconds or 10.81 minutes from the activity time on CVSM. Based on the simulation results, production results increased by 80% after the proposed improvements, from 4,671,945 pcs per month to 8.429.679 pcs per month.

**Keywords** : 7 Waste, Lean Manufacturing, Value Stream Mapping, VALSAT, Process Activity Mapping, 5 Whys Analysis, ProModel Simulation