

USULAN PERBAIKAN PROSES PRODUKSI BRIKET DENGAN PENDEKATAN LEAN SIX SIGMA STUDI KASUS PADA CV DANAGUNG

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ABSTRAK

Perusahaan CV Danagung adalah perusahaan manufaktur yang bergerak di pembuatan briket arang dengan bahan baku tempurung kelapa. Pada bulan Januari 2019 terdapat satu *buyer* pemesanan briket arang dengan jenis *Cube* (2,5 x 2,5) sebanyak 26 ton. Permasalahan yaitu produk cacat retak sebanyak 460 Kg (33.120 butir) dengan persentase cacat sebesar 2% serta terdapat pemborosan aktivitas produksi di penjemuran manual, dan adanya pengulangan aktivitas yang terjadi pada saat memasukan arang briket ke dalam karung. Berdasarkan hasil penelitian penyebab terjadinya cacat retak briket *Cube* adalah tempurung mentah, dan bau tir, cetakan tidak tepat dan terdapat cela sehingga tidak sejajar, *fan belt* yang longgar, *screw* aus, *dice* di mesin ulenan rusak dan pemborosan aktivitas produksi di penjemuran manual dan pengulangan aktivitas. Usulan perbaikan cacat produk yakni melakukan pengecekan, pergantian dan pengaturan ulang, *screw* aus diratakan dengan proses las pada dinding tabung, *fan belt* dilakukan pengecekan, pergantian dan pengaturan ulang, *screw* aus diratakan dengan proses las pada dinding tabung, dan *dice* di mesin ulenan dilakukan proses las dengan sudut menyesuaikan *screw*. Usulan aktivitas yakni menghilangkan penjemuran manual serta menggabungkan stasiun timbangan dan *packaging*. FVSM dengan waktu siklus selama 62.68 jam dan *lead time* selama 0.1419 jam.

Kata Kunci: *Briket, Cube, Future Value Stream Mapping, Lean Six Sigma*

ABSTRACT

The CV. Danagung is a briquette production company with coconut shell raw material that produces unexpected quality and becomes a waste activity. In January 2019 there was one buyer ordering 26 tons of charcoal briquettes of the cube type (2.5 x 2.5). The problem was the cracking defects of 460 Kg (33,120 items), with a defect percentage of 2%, and there was waste of production activities in the manual drying, and the repetition of activities that occurred when pouring the briquette charcoal into sacks. This research used the method of the Lean Six Sigma. This method was used to identify the defective products, and eliminated the waste of non-value-added activities (NVA), and found out about the proposal of the product improvement defects, and shortened the production process time in the briquettes. It consisted of Define (Project Statement, and SIPOC Diagram), Measure (Work activity data, CTQ, DPMO calculation, CVSM), Improve (CVSM Analysis, and Causation), Analyze (FVSM and 5W + 1H), and Control (Proposal of Factory Layout). Based on the results of the research, the causes of the cube briquettes cracking defects were the raw shells, and bad odors, improper molds, and blemishes that were not parallel, loose fan belts, worn screws, broken dice in the machines, and the wasteful production activities in the manual drying, and the activity repetition. The proposal for improvements in the product defects were checking raw materials, molds must have been prescribed with mold walls, fan belts checked, alternation and rearrangement, worn screws were flatted with welds on the tube walls, and the dice in the machine was welded with the angle adjusting the screws. The proposal for the activity was to eliminate manual drying and combining weighing stations and packaging. The FVSM with a cycle time of 62.68 hours, and the lead time of 0.1419 hours.

Keywords: *Briquette, Cube, Future Value Stream Mapping, Lean Six Sigma*

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