

ABSTRAK

Judul: Analisis Pengendalian Produksi Panel Geoforce Segmental Retaining Wall (GSRW) Dengan Metode Lean Six Sigma, Nama: Eko Panji Prasetyo, NIM: 41121110041, Pembimbing: Retna Kristiana, ST, MT, 2022

PT. Geoforce Indonesia adalah salah satu perusahaan jasa konstruksi yang berhasil mengembangkan suatu alternatif konstruksi dinding penahan tanah yaitu Geoforce Segmental Retaining Wall (GSRW). Masalah yang saat ini masih terjadi pada proyek GSRW PLTU Suralaya adalah pengendalian kualitas yang belum mencapai tingkat maksimal serta adanya delays saat proses produksi panel GSRW.

Penelitian ini bertujuan untuk mengetahui nilai six sigma, Process Cycle Efficiency (PCE) sebelum dan sesudah perbaikan, serta tindak lanjut yang dilakukan dalam upaya meminimalkan waste pada proses produksi dengan mengimplementasikan lean six sigma. Metode pengumpulan data diperoleh dari data primer dan data sekunder, pada tahap analisis dilakukan dengan pendekatan Define, Measure, Analyze, dan Improve (DMAI).

Dari hasil analisis diperoleh nilai six sigma 3.37, dimana masuk kedalam kategori rata-rata industri Indonesia. Process Cycle Eficiency (PCE) diperoleh 53.87%, kemudian dilakukan upaya peningkatan melalui penghilangan waste yang ada, sehingga diperoleh peningkatan menjadi 60,55%. Adapun usulan perbaikan defect perlu dilakukan pada beberapa faktor diantaranya menjaga workability beton, meningkatkan ketrampilan manpower, perbaikan cetakan, efektivitas alat bantu, metode pelaksanaan dan pemilihan lokasi produksi yang tepat. Sementara itu untuk usulan perbaikan delays perlu dilakukan perbaikan seperti schedule pengiriman beton, pengecekan kondisi kesehatan manpower, maintenance alat, siklus pengecoran, dan perencanaan schedule mobilisasi manpower serta alat.

Kata Kunci: Lean Six Sigma, Retaining Wall, Waste.

ABSTRACT

Title: Production Control Analysis of Geoforce Segmental Retaining Wall (GSRW) Panels Using the Lean Six Sigma Method, Name: Eko Panji Prasetyo, NIM: 41121110041, Lecturer: Retna Kristiana, ST, MT, 2022

PT. Geoforce Indonesia is a construction service company that has succeeded in developing an alternative retaining wall construction, namely the Geoforce Segmental Retaining Wall (GSRW). Problems that are currently still occurring in the GSRW PLTU Suralaya project are quality control that has not reached the maximum level and delays in the GSRW panel production process.

This study aims to determine the value of six sigma and process cycle efficiency (PCE) before and after repairs, as well as the follow-up carried out in an effort to minimize waste in the production process by implementing lean six sigma. The data collection method obtained primary and secondary data; in the analysis phase, it was carried out using the define, measure, analyze, and improve (DMAI) approach.

From the analysis results, a six-sigma value of 3.37 was obtained, which is included in the category of the Indonesian industrial average. Process Cycle Efficiency (PCE) was obtained at 53.87%, and then efforts were made to increase it through eliminating existing waste, so that an increase of 60.55% was obtained. The proposed defect repairs need to be done based on several factors, including maintaining concrete workability, increasing manpower skills, mold repair, tool effectiveness, implementation methods, and selecting the right production location. Meanwhile, improvements need to be made for the delays improvement proposal, such as concrete delivery schedules, checking manpower health conditions, equipment maintenance, casting cycles, and planning manpower and equipment mobilization schedules.

Keywords: Lean Six Sigma, Retaining Wall, Waste.

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