

ABSTRAK

Aedo Radewa Nayapada (01629210015)

ANALISIS WASTE DALAM PELAKSANAAN *LEAN CONSTRUCTION* PADA KONTRAK *DESIGN AND BUILD LUMP SUM* (STUDI KASUS PROYEK PEMBANGUNAN TERMINAL KIJING)

Tesis, Fakultas Sains dan Teknologi (2024)

(xviii + 100 halaman; 33 gambar; 39 tabel; 66 lampiran)

Proyek Pembangunan Terminal Kijing merupakan Proyek Mega yang berjenis *Design and Build Lump Sum* dan dikerjakan oleh PT. Wijaya Karya. Kontraktor menerapkan *Lean Construction* dalam mengelola proyek tersebut. Beberapa jenis *waste* yang ditemukan dalam pelaksanaan yaitu *waste over production*, *inventory*, *waiting*, dan *non-utilized talent*. Penelitian ini bertujuan untuk mengetahui implementasi *Lean Construction* dan menemukan konsep *Lean Construction* yang masih belum optimal sehingga memunculkan *waste*. *Waste* diidentifikasi dari data *lesson learned* proyek dan wawancara dengan Manajer Proyek. Selanjutnya indikator penyebab *waste waiting* dan *non-utilized talent* didapat dari peneliti terdahulu dan pakar ahli manajemen proyek, *waste over production* dan *inventory* diuji melalui evaluasi analisis pareto dan kombinasi wawancara pakar ahli manajemen proyek yang menangani proyek tersebut. Hasil penelitian menunjukkan bahwa proyek ini masuk kategori pengaplikasian *Lean Construction* dengan interval 84% - 100%. Indikator paling dominan pada *waste waiting* yaitu menunggu pembayaran material yang harus *cash before delivery*, *waste non-utilized talent* yaitu pekerja lapangan kurang disiplin dalam menerapkan *planning* dan target pekerjaan, *waste over production* yaitu pada pekerjaan pengadaan tiang pancang beton, *waste inventory* yaitu pekerjaan *precast* beton dermaga. Kendala yang menghambat proses *Lean Construction* yaitu adanya *constraint* yang disebabkan oleh *owner* seperti terjadinya keterlambatan pembebasan lahan dan demo nelayan, terjadinya perubahan pada ruang lingkup pekerjaan dan gambar DED. Penyelesaian terbaik menangani proyek *Design and Build Lump Sum* yaitu konsep *Lean Construction* harus ditentukan diawal saat tender / saat proses FEED dan harus ada target serta monitoringnya.

Kata Kunci: *Lean Construction*, *Waste*, Manajemen Proyek, *Design and Build Lump Sum*

Referensi: 36 referensi (2000-2023)

ABSTRACT

Aedo Radewa Nayapada (01629210015)

ANALYSIS OF WASTE IN THE IMPLEMENTATION OF LEAN CONSTRUCTION ON DESIGN AND BUILD LUMP SUM CONTRACTS (CASE STUDY OF THE KIJING TERMINAL DEVELOPMENT PROJECT)

Thesis, Faculty of Science and Technology (2024)

(xviii + 100 pages; 33 figures; 39 tables; 66 appendices)

The Kijing Terminal Construction Project is a Mega Project of a Design and Build Lump Sum type carried out by PT Wijaya Karya. The contractor applies Lean Construction in managing the project. Several types of waste found in the implementation are waste over production, inventory, waiting, and non-utilized talent. This study aims to determine the implementation of Lean Construction and find Lean Construction concepts that are still not optimal and creating waste. It was identified from project lesson learned data and interviews with Project Managers. Furthermore, several indicators that causes waste waiting and non-utilized talent were obtained from previous researchers and project management experts. Waste over production and inventory were tested through Pareto analysis evaluation and a combination of interviews with project management experts who handled the project. The results revealed that this project was categorized as applying Lean Construction with an interval of 84% - 100%. The most dominant indicator of waste waiting is the waiting for payment related to materials that must be cash before delivery, waste non-utilized talent of field workers lacking discipline in implementing planning and work targets, waste over production in the procurement of concrete piles, and waste inventory of precast concrete pier work. The obstacles hindering the Lean Construction process are constraints caused by the owner, such as delays in land acquisition and fishermen protest, changes in the scope of work, and DED drawings. The best solution for handling Design and Build Lump Sum projects is that the Lean Construction concept that must be determined at the beginning of the tender/during the FEED process and there must be targets and monitoring.

Keywords: Lean Construction, Waste, Project Management, Design and Build Lump Sum

References: 36 references (2000-2023)