

ABSTRAK

Laboratorium pengujian produk keramik pada satuan kerja BBSPJI Keramik dan Mineral Nonlogam merupakan instansi pemerintah dibawah Kementerian Perindustrian yang sudah menerapkan dan terakreditasi ISO 17025:2017. Dalam pelaksanaan pengujian laboratorium menetapkan standar pelayanan minimum (SPM) dalam melakukan pengujian untuk masing-masing komoditi pengujian. Namun berdasarkan data capaian pengujian masih terdapat keterlambatan hasil pengujian yang dihasilkan. Dari data hasil pengujian tahun 2023 dari total sampel yang di lakukan poengujian masih terdapat keterlambatan waktu pelayanan 41%. Berdasarkan hasil observasi dilapangan terdapat permasalahan pada proses pengujian berupa *waste* yang mengakibatkan lamanya *lead time* pada saat pengujian. Tujuan dari penelitian ini adalah (1) Menganalisis *waste* pada proses pengujian di BBSPJI Keramik dan Mineral Nonlogam. (2) Merancang Implementasi *waste reduction* dengan metode DMADV untuk menurunkan total waktu jasa (*lead time*) pada laboratorium BBSPJI Keramik dan Mineral Nonlogam. Penelitian ini menggunakan pendekatan metode DMADV (*Define, Measurement, Analize, Design*). Dalam analisis nya menggunakan pendekatan kuantitatif *lean service* melalui *Value Stream Mapping*, Identifikasi *Waste* dan perhitungan efisiensi proses pengujian. Hasil penelitian berupa *Future State-Value Stream Mapping* usulan 1 merupakan optimalisasi proses pengujian dengan mereduksi pemborosan yang terjadi dan usulan 2 berupa optimalisasi dilengkapi dengan *layout* proses yang memungkinkan uji dilakukan dalam waktu bersamaan. *Future State Map* usulan 2 merupakan usulan terbaik di liat dari efisiensi proses yang dihasilkan. Hasil dari *Future State Map* usulan 2 komoditi Ubin keramik dihasilkan dari 51,7 menjadi 64,8%, komoditi refraktori dari 28,5 menjadi 37,25% dan komoditi *tableware* dari 54,4% menjadi 60,5%. Waktu penerapan direncanakan dalam 6 bulan.

Kata Kunci: *Lean, Value Stream Mapping, DMADV, Keramik, Efisiensi Proses*

ABSTRACT

The ceramic product testing laboratory at the Center for Industrial Standardization and services of Ceramics and Non-metallic Minerals work unit is a government agency under the Ministry of Industry which has implemented and been accredited with ISO 17025:2017. In carrying out laboratory testing, minimum service standards (SPM) are determined for carrying out testing for each testing commodity. However, based on test achievement data, there is still a delay in the test results being produced. From the test results data in 2023, of the total samples that were tested, there was still a 41% delay in service time. Based on the results of observations in the field, there were problems in the testing process in the form of waste which resulted in long lead times during testing. The aim of this research is (1) analysis waste in the testing process at BBSPJI Ceramics and Non-metallic Minerals. (2) Designing the implementation of waste reduction using the DMADV method to reduce the total service time (lead time) in the Center for Industrial Standardization and services of Ceramics and Non-metallic Minerals laboratory. This research uses the DMADV (Define, Measurement, Analyze, Design) method approach. The analysis uses a quantitative lean service approach through Value Stream Mapping, Waste Identification and calculating the efficiency of the testing process. The research results in the form of Future State-Value Stream Mapping, proposal 1, is an optimization of the testing process by reducing the waste that occurs and proposal 2 is an optimization equipped with a process re-layout which allows tests to be carried out at the same time. Future State Map proposal 2 is the best proposal in terms of the resulting process efficiency. The results of the proposed Future State Map for 2 commodities produced ceramic tiles from 51.7 to 64.8%, refractory commodities from 28.5 to 37.25% and tableware commodities from 54.4% to 60.5%. Implementation time is planned in 6 months.

Keywords: Lean, Value Stream Mapping, DMADV, Ceramic, process efficiency