ABSTRACT

Omah Tahu Sehat Asri Serasi, a small and medium-sized enterprise (SME) producing tofu, still employs a semi-traditional production system that has the potential to generate various types of waste, including waiting time, inefficient material transportation, and non-value-added activities. These conditions reduce production efficiency and contribute to a longer production cycle time. Therefore, this study aims to analyze the current production flow using Current State Value Stream Mapping (VSM), identify the types of waste occurring in the production process, and propose process improvements through the Lean Manufacturing approach to reduce cycle time in tofu production.

This study employed a descriptive approach using a case study method at Omah Tahu Sehat Asri Serasi SME in Semarang Regency. Data were collected through direct observation of the production process, in-depth interviews with the business owner and production workers, and company documentation. Data were analyzed using the Lean Manufacturing approach with Value Stream Mapping (VSM) as the primary analytical tool. The analysis began with the development of a Current State Value Stream Map, followed by Process Activity Mapping (PAM) to classify production activities into Value-Added (VA), Non-Value-Added (NVA), and Necessary Non-Value-Added (NNVA) activities. Subsequently, waste was identified based on the Seven Wastes concept, and a Future State Value Stream Map was developed to propose process improvements.

The results indicate that the production process still contains several types of waste, particularly waiting, transportation, motion, defects, overproduction, inventory, and overprocessing. The most significant waste was identified in the waiting activity during the soybean soaking process, as well as delays during the pressing and packaging stages, which contributed to an increase in production cycle time. The Process Activity Mapping analysis revealed that although most activities were classified as Value-Added, several Non-Value-Added and Necessary Non-Value-Added activities remain and can be minimized through improvements in production layout, reduction of unnecessary material movement, and enhancement of production equipment. Based on these findings, a Future State Value Stream Map was proposed to reduce waste and improve production efficiency, thereby reducing cycle time and enhancing the operational performance of the SME.

Keywords: Lean Manufacturing, Value Stream Mapping, Cycle Time, Seven Waste