

ABSTRACT

PT XYZ is a manufacturing company in the snacks sector, one of which is wafer sticks. In its production, there are several wastes that occur. These wastes can become obstacles in the production process of wafer sticks, especially in the manual line, so efforts need to be made to reduce waste that occurs. Reducing waste is necessary to improve the effectiveness and efficiency of the production process in the company. The purpose of this research is to identify waste and the causes of waste that occur in the manual line wafer stick production process at PT XYZ. The results of this research are expected to contribute to PT XYZ in reducing the occurrence of waste in its production process. Based on observations, several wastes were found, namely waitingtime, transportation, and defect WIP. Based on these issues, Value Stream Mapping (VSM) is used to understand the production process on the manual wafer stick production floor. PAM (Process Activity Mapping) is used to identify the classification of activities and to identify the nine Wastes (E-DOWNTIME Waste). Based on the identification, Waste in waitingtime, transportation, and defects was found. Subsequently, further analysis was conducted using a fishbone diagram and discussions with the value stream Manager regarding improvement proposals such as using pipes as supports for automatic dough, creating a dedicated support dough pathway, developing a work instruction for handling WIP in box containers, adding an induce machine, adding a belt conveyor, and replacing the rotary feeding with a larger capacity. The proposed changes can reduce non-value added (NVA) time and decrease waste occurring on the production floor of the manual wafer stick line. Furthermore, these proposals were made into a repair PAM and mapped on a future state value stream mapping to assess improvements in the production flow.

Keywords: Lean Manufacturing, Value Stream Mapping, Process Activity Mapping, E-DOWNTIME Waste, Fishbone Diagram

ABSTRAK

PT XYZ merupakan perusahaan manufaktur dibidang makanan ringan salah satunya yakni *wafer stick*. Dalam produksinya terdapat beberapa *waste* yang terjadi. *waste* tersebut dapat menjadi hambatan dalam jalannya proses produksi *wafer stick* khususnya di lini manual sehingga perlu dilakukan usaha untuk mengurangi *waste* yang terjadi. Mengurangi *waste* perlu dilakukan guna untuk meningkatkan efektivitas dan efisiensi dari jalannya proses produksi di perusahaan. Tujuan penelitian ini yakni untuk mengidentifikasi *waste* serta penyebab *waste* yang terjadi dalam proses produksi *wafer stick* lini manual di PT XYZ. Hasil penelitian diharapkan dapat memberikan kontribusi bagi PT XYZ untuk mengurangi terjadinya *waste* pada proses produksinya. Berdasarkan pengamatan ditemukan adanya beberapa *waste* yang terjadi yaitu *waitingtime*, *transportation* dan *defect* WIP. Berdasarkan permasalahan tersebut *Value Stream Mapping* (VSM) digunakan untuk mengetahui proses produksi pada lantai produksi *wafer stick* lini manual. PAM (*Process Activity Mapping*) untuk mengetahui klasifikasi aktivitasnya serta dilakukan identifikasi sembilan *waste* (E-DOWNTIME *Waste*). Berdasarkan hasil identifikasi ditemukan *waste waitingtime*, *transportation* serta *waste defect*. Setelah itu dilakukan analisa lanjutan menggunakan *fishbone diagram* serta dilakukan diskusi dengan *value stream manager* terkait usulan perbaikan berupa penggunaan pipa sebagai support adonan *automatic*, pembuatan jalur khusus support adonan, pembuatan WI perlakuan support WIP dalam box container, penambahan *induce machine*, penambahan belt conveyor serta mengganti feeding rotary dengan kapasitas yang lebih besar. Hasil usulan tersebut dapat mengurangi waktu *Non Value Added (NVA)* dan mengurangi *waste* yang terjadi pada lantai produksi *wafer stick* lini manual. Selanjutnya hasil usulan tersebut dibuat PAM perbaikan dan dipetakan pada *future state value stream mapping* untuk mengetahui perbaikan dari aliran produksi.

Kata kunci: *Lean Manufacturing*, *Value Stream Mapping*, *Process Activity Mapping*, E-DOWNTIME *Waste*, , *Fishbone Diagram*