ABSTRACT

PT. XYZ is a company engaged in the field of TPT (Textiles and Textile Products). One of the products produced by PT. XYZ is a mosquito net that will be the focus of the object of this final project. PT. XYZ adheres to the Make to Order (MTO) production system. Based on the company's historical data, there are a number of gaps from non-achievement of production in September 2021 - December 2021. Unachieved production is indicated due to waste that occurs throughout the mosquito net production process. Therefore, lean manufacturing will identify the types and causes of the waste that occurs. The analysis was performed using Value Stream Mapping (VSM) and Process Activity Mapping (PAM). By using VSM and PAM it will be known the total lead time, Non-value-Added (NVA) activity, and types of waste. The lead time of the mosquito net production process is 32378.34 seconds. The types of waste identified are motion, defect and waiting with a total NVA time of 875.05 seconds. This research will focus on motion waste because it has the highest percentage of the other two wastes, which is 63.02%. Furthermore, an analysis will be carried out using the 5 Whys to find out the root causes of activities that cause waste motion. From the existing problems, the design of the implementation of 5s activities is carried out to minimize waste motion that occurs. The proposed implementation of 5S activities consists of seiri, seiton, seiso, seiketsu and shitsuke that aim to minimize NVA in the production process. With the proposed design, identified improvements using future value stream mapping. The results obtained are the total lead time can be reduced up to 599.64 seconds accompanied by the application of kaizen to achieve maximum results.

*Keywords — **Lean Manufacturing, Waste, 5S, PAM, VSM.***