

ABSTRACT

PT Kharisma Printex is a private manufacturing company engaged in the textile industry by providing services for production of motif printing on grey fabric. During the production process, there was found waste transportation that affect the production target of PT Kharisma Printex. Based on the results of direct observations and data that has been collected, waste transportation is caused by poor layout which resulted in backtracking movement with a total distance of 57.05 meters. This may affect the timing of material transportation activities. In addition, the floor area of production of PT Kharisma Printex is untidy because of the items laid irregular and blocking the aisle for activities of material transportation.

Lean manufacturing methods are used to minimize waste transportation. The research began with mapping the time and activity stream of production processes using value stream mapping (VSM) and process activity mapping (PAM). The next stage is to identify the root cause of the waste transportation problem with the fishbone diagram.

The solution to reduce root cause of the problem that has been identified are by designing the proposed improvement using lean manufacturing tools that design layout refinements and alternative selection of material handling equipment (MHE).

Key word: lean manufacturing, waste transportation, layout planning