

**Kata kunci :** *lean manufacturing, Value Stream Map, Process Activity Map, eliminasi pemborosan, Sperry Top Sider, PT SEMASI*

## **ABSTRACT**

### **IMPROVEMENT DESIGN OF E-LINE ASSEMBLING**

**DEPARTEMENT AT PT SEMASI**

**USING LEAN MANUFACTURING**

by

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PT Sepatu Mas Idaman (SEMASI) is one of many companies in manufacturing industry in Indonesia with the international market. Production system used make to order system. One of products that are being produced is Sperry Top Sider whis produced by Line E. The demand for Sperry Top Sider is 2.000 pieces per day. However, Line E is only able to produces 1.500 pieces per day. The waste in Assembling Department is 97,02% and the lead time is 13,09 hours or 47.158,48 seconds. In order to do that, the Value Stream Mapping is established to draw the value stream and improvement to elimination wastes is made using lean manufacturing technics.

The research phase begin with the Current State Drawing to identify the waste that occured. In this phase, it is discovered through Value Stream Mapping that was happened in Assembling Departement is 97,02% and the lead time is 13,09 hours or 47.158,48 seconds. Then, the detailed mapping using Process Activity Mapping is made and results in the most acivities that happened like delay 92,22%, tranportation 4,69%, operation 3,06%, and inspection 0,03%. The cause of waste are WIP time between work element that increase the lead time. Then the future state design is began to get the strategy and solution about the waste problem. The solution for the problem are the applications of continous flow in the production and Full Work methods, improve the bottleneck, and downsizing lot in several process. The lead time at this stage is 1,71 hours or 6.163,01 seconds and production can reach 2.000 pieces every day.

**Key words:** lean manufacturing, Value Stream Map, Process Activity Map, waste elimination, Sperry Top Sider, PT SEMASI