LEAN MANUFACTURING IMPLEMENTATION TO REDUCE LEAD TIME SHOULDER
Case Study in PT. Barata Indonesia (Persero)

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ABSTRACT

PT. Barata Indonesia (Persero) is foundry, manufacturing and EPC (Engineering, Procurement and Construction) company, where need to increase productivity to compete with other company and to gain maximum profit. To reach that purpose, they have to know value added activity of product (good and/or service), eliminate waste and reduce lead time. Because of that, needed lean manufacturing approach.

The purpose of this research is how to identify, eliminate waste so lead time shoulder can be reduced. Understanding condition of company illustrated with the Big Picture Mapping. Waste can be identified by seven waste, then used detail mapping with Value Stream Analysis Tools (VALSAT), and will be analyzed to define the root cause of waste.

Based on analysis data, we can identify 3 dominant waste, there are waiting with average score 9,1 or 26%, defect with average score 5,64 or 16,1%, Unappropriate Processing with average score 4,94 or 14,1%. Average score waste is multiply with factor detail mapping tools, so we get dominant detail mapping tools. There are Process Activity Mapping dan Supply Chain Response Matrix. Lead time shoulder production 4195 minutes. After recomendation improvement, we can get reduction lead time is 1494 minutes. So lead time shoulder is 2701 minutes, with reduce cut off and grinding time.

Keywords : Lean manufacturing, Big Picture Mapping, Seven Waste, Value Stream Analysis Tools (VALSAT)