QUALITY IMPROVEMENT THROUGH WASTE REDUCTION USING LEAN RISK MANAGEMENT APPROACH IN PT. GUNAWAN DIANJAYA STEEL SURABAYA

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Abstract
Gunawan Dianjaya Steel Company (GDS) is one of steel plate company that focuses on customer satisfaction by providing high qualified products. However, the high defect still exists in the product. Based on production data from June to August 2009, the high defect existed in the *slab Mild Steel* with specification *ASTM A-36*. The presence of high defect makes the company reproduce the plate or to *rework* the product that can still be processed to meet other customers’s needs, so it was indicated by the presence of waste and *non value added activities* during the production process. Approach used to reduce waste is Lean Risk Management. Merging Risk Management Lean approach can support each other to achieve better performance. Stages of research conducted in this research consist of a system description using the Big Picture Mapping, identificate of the most influential waste using Pareto, searching the cause of the critical waste with RCA and FMEA, and finally determination of the best alternative by making use value analysis and sensitivity analysis. The results showed that the plate ASTM A-36 production process have defects and waste waiting. To overcome such waste is proposed to increase the use of alternative repair by the addition of measuring temperature equipment alarm markers and conducting training for the Maintenance Department workers. Then, the estimated improvement was done to determine the increase is happening. The results showed that non-value added activities can be reduced 3 percent from the original, 36 percent.

Keywords: steel plate, Lean Risk Management, Waste, Big Picture Mapping, RCA, FMEA, value analysis, sensitivity analysis.