

Reduction of Wastes in MCB Manufacturing line using Lean Concepts



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Abstract:

In today's business scenario of shorter product lead time, high degree of competition and higher product variations the importance of lean is ever increasing. One must have to continuously reduce or eliminate all types of wastes to stay ahead in the business. It is very important to introduce a lean system suitable for the product and organisation culture. So Siemens introduced their own version of lean manufacturing called Siemens Production System (SPS). 5SL Miniature Circuit Breaker (MCB) is new to Siemens Ltd, Aurangabad. Siemens has got good market response for this new MCB product since its launch in India. Siemens need to increase the capacity to meet the customer demand with increased profitability and with the lowest minimum possible investment.

Project started with defining aim and objectives. Literature review was carried out on lean tools and techniques. 5SL MCB product assembly line has been studied for understanding areas for improvement. Data of 5SL MCB line has been collected and analyzed by using value stream mapping, muda analysis, time study, process mapping, cause and effect diagram and why-why analysis. The areas for improvement have been identified to achieve the target of reducing the lead time by 20%. It was decided to design a new workstation for packeting and magnetic testing operation. Three proposals were made and evaluated for viability. After implementing the selected proposal, validation was done and areas for further improvements are suggested.

The project has been completed successfully by achieving the predetermined aim of reducing the lead time by 20%. The lead time has reduced to 1.05 days from 1.52 days that is 30% reduction in lead time. Besides the reduction in lead time, there were some other benefits because of the project like reduction in WIP (18200 numbers to 13700 numbers), improved value added ratio (0.08 to 0.1), easier material handling and improved flow and improved morale.



Project outcome: Reduction on lead time