

Improvement of production and logistics processes by application of LEAN tools, a case study

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Abstract— In today's market conditions, organizations can stay competitive only through adequate and timely reactions to market changes and elimination of all activities that do not add value to goods/services, hinder and slow down systems' processes. The material flows in the entire logistics chain and particularly within the production process need to be continuous with maximum production flexibility - the system in the shortest period of time corresponding to the requirements of every customer. This can be achieved by application of LEAN tools. This paper illustrates a way in which a LEAN approach to process organization can realize significant savings in resources and increase in profits and quality. LEAN represents a specific approach to planning and organization of production process (or provision of services) and supply, eliminating all activities that don't generate added value to a product or service, as well as a tendency for continuous systems' improvement. Within the paper the production and logistics processes related to a particular product, at the plant of a global leader in electrical components and systems, are analyzed. Based on the detected waists the particular LEAN tools, such as Value stream mapping, 5S, kaizen events, total production maintenance, standardized work etc., have been applied with the philosophy of creating continuous improvement working environment. This approach resulted in significant resources savings, improved product quality, greater production and logistics flexibility, safer workplace and overall better organization of the company. The achieved improvements have been measured and validated. As a conclusion is given a critical analysis of the applied approach.

Key words— LEAN tools, logistics, production.

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