

Application of Lean Production System on process improvement - A Case Study of a Color Filter Manufacturer

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ABSTRACT

3C products have been everywhere in modern life, such as: LCD monitors, cell phones, cameras, electronic-books and other products. The TFT-LCD panel is the indispensable component of those products. With increasing demand for panels, improving product quality and reducing costs become major issues of the manufacturers. In recent years, lean production has been widely used in manufacturing and services and its effectiveness is obvious.

This study focuses on the application of value stream mapping in lean manufacturing to TFT-LCD color filter manufacturing industry. Lean production activities mainly follows the five steps to improvement in Womack and Jones (2004), e.g., identify value, map the value stream, create flow, establish pull and seek perfection. They can be applied to identify activities that may help the case company create value, and further eliminate unnecessary waste. By drawing the future state value stream map, an improvement plan is formed, which guides the case company to the future ideal state. The results showed that the benefit obtained from implementing lean production to the case company is significant.

Keyword: Lean Production 、 Value Stream Mapping 、 TFT-LCD 、 Color Filter