

LEAN MANUFACTURING TOOLS (TPM + SMED)

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In a rapidly developing market, the issues of increasing the efficiency of the production process by reducing losses are becoming relevant for industrial enterprises. All this contributes to the introduction of lean manufacturing tools.

Lean manufacturing is a production process based on an ideology of maximizing productivity while simultaneously minimizing waste within a manufacturing operation [1]. In the current conditions of the organization of the production process, the most promising ones are the TPM and SMED systems.

TPM (Total Productive Maintenance) allows to reduce losses due to equipment downtime, to improve the quality of maintenance and overall equipment performance. An enterprise can simultaneously implement all TPM directions or select several for priority implementation. The chosen directions should be fixed in the standards and communicated to all units of the enterprise.

Another effective tool for priority implementation is the SMED (Single Minute Exchange of Dies) system, which allows the company to reduce costs and losses during reconfiguration of the equipment. The introduction of SMED allows the enterprise to change the product range quickly, to increase flexibility by reducing the batch size. This leads to less time spent on completing the batch and thus shortens the delivery time.

When using TPM and SMED systems together, it is possible to switch to a more efficient system of working with equipment and as well as to increase the level of competitiveness of the enterprise in the market.

References

1. What is lean manufacturing and the 5 principles used? [Electronic resource] // Training Within Industry. – Mode of access : <https://www.twi-global.com/technical-knowledge/faqs/faq-what-is-lean-manufacturing>. – Date of access : 12.09.2021.