Shorter lead times and higher quality at PMT thanks to QRM

08 September 2023, 12:09

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PMT wanted to strengthen its position by offering better service, staying ahead of the competition while reducing production costs. The company was struggling with delivery delays and a high rejection rate, and wanted to address both challenges. It chose to adopt the QRM strategy.

Plastics & Mechanical Technologies (PMT) is a Herstal-based machine workshop specialising in the manufacture and repair of screws and cylinders and other injection and extrusion parts for plastics processing companies worldwide. The company boasts more than 40 years of professional experience.

PMT wanted to strengthen its position by offering a better service than the competition while also reducing production costs. The company was struggling with delivery delays and a high rejection rate, and wanted to address both challenges. In its search for a suitable strategy, the company discovered Quick Response Manufacturing (QRM). For this, it could count on the help of Sirris, which directed the company to a QRM bootcamp and learning networks to participate in.

The company's ambition was to reduce order lead time, set up online sales, which goes hand in hand with great flexibility and speed in making products available and a reduction in stock. If it wanted to achieve this, the time between order and delivery had to be reduced.

Revolution on the shop floor

Initially, about 50 per cent of the orders were delivered on time, with an average delay of 9 days. Half of those delays were due to an external heat treatment process. Lead times were 6-8 weeks for an injection moulded screw, PMT's flagship product. As much as 95 per cent of that time consisted of waiting time. Method analysis showed too many steps, too much complexity, a lot of time wasted searching for information and a lack of transparency on the shop floor ...

PMT decided to work at different levels to reduce lead times. Entirely according to the QRM approach, small organisational problems were tackled to achieve big results. The shop floor was rearranged to create a more logical physical flow. Small but dynamic production cells consisting of about four machines, manned by polyvalent teams allowed a piece to be fully processed in a short time and leave the production cell quickly. The company opted to machine a smaller number of pieces at the same time and hold smaller intermediate stocks, allowing the pieces to move more quickly through the flow. Only a limited number of trays is used: if no trays are present, no new production orders can be started. This is how WIP can be kept limited.

An ERP system with shop floor control module was procured and implemented. This system schedules work orders for each operator, so they clearly know what to do.

Lower cost, fast and efficient

The results that PMT managed to achieve with its interventions are impressive: a 30 per cent reduction in WIP, 20 per cent shorter order-to-delivery times, 15 per cent fewer quality problems coming to light at the end of production and a 25 per cent productivity gain on the production floor. The confidence in the employees own skill was also boosted.

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