



The
University
Of
Sheffield.

AMRC
Advanced Manufacturing
Research Centre

SME Case Study

Time and cost saving ideas for UK's largest supplier of electric drive systems

Challenge

To improve the factory flow and processes of company Magnetic Systems Technology to help generate time and cost savings where possible.





Background

Magnetic Systems Technology (Magtec) based in Rotherham, is the UK's largest supplier of hybrid and electric drive systems. It looks at the design, development, manufacture, installation and rework of electric drives for a wide range of vehicle types. These include commercial heavy goods vehicles, buses, trains, off-road multi-wheeled and tracked defence vehicles, as well as bespoke specialist vehicles.

Magtec came to the University of Sheffield Advanced Manufacturing Research Centre (AMRC) with the objective to understand how their electric motors factory flow could be optimised to improve the company's overall factory processes.

This project was paid for by the AMRC, using funds from the High Value Manufacturing Catapult as part of its commitment to working with small and medium (SME) manufacturers and took place across five days.

Innovation

AMRC engineers developed a full-scale company assessment, which included all of the relevant data in order to give Magtec an idea on how to obtain the best setting and calculate its output that was able to help drive informed decision making.

Result

The AMRC performed a review of Magtec's current electric machine factory flow in order to identify potential ideas to optimise resources that would help to generate time/cost savings, an increment in throughput, better company utilisation and to visualise valuable alternatives to current configuration.

Impact

Areas of improvement and ideas to optimise resources within Magtec were generated, presented and discussed with the company.

Though the overall exercise was limited to just five-days, the AMRC helped Magtec identify and quantify bottleneck processes. With this evidence of the potential improvement in-hand, Magtec were then successful applying for funding from the Advance Propulsion Centre to address these issues. [Find out more.](#)

It will enable production scale-up of motors produced by Magtec and includes two High Value Manufacturing (HVM) Catapults: the Manufacturing Technology Centre (MTC) in Coventry and the AMRC in Sheffield, whose expertise will be focused on utilising the most innovative manufacturing processes, assembly methods and development activities.



The AMRC helped Magtec look at its factory flow processes so the company can consider options to generate time and cost savings.

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