



Secomak Limited

KTP Case Study

Introduction

Secomak is an industry leader in industrial drying solutions. We have developed a range of application-specific equipment to cater for the needs of every industry including food and drink, electronics, consumer goods, and more. Such machines are currently very high energy users in many industrial processes. The purpose of this project was to apply a range of scientific principles to industrial drying machines to achieve a real reduction in energy consumption without compromising performance.

Business Challenge

Drying processes are an intensive use of energy in manufacturing industry, accounting for between 15 - 20% of total industrial energy utilisation. Industrial drying technology demands an innovative approach to produce solutions which satisfy customers' requirements for total moisture removal, whilst minimising noise and energy consumption. The problems could not be solved by anything less than a collaborative partnership between scientists, technologists and manufacturers.

How KTP helped

Building on existing strong links with the company, a KTP was established with the School of Engineering and Technology to develop Dryguide, a total drying solution for the manufacturing industry which is more energy efficient than any other on the market. The development combined advanced computational methods with energy efficiency research in the aerospace/automotive sector.

A University of Hertfordshire graduate in Aerospace Systems has brought his skills in Computational Fluid Dynamics, project management and project planning to the project. The application of this cross-sector knowledge transfer has produced the desired reduction in both noise and energy consumption on all Secomak systems.

Through the KTP, Secomak and the University of Hertfordshire have produced a drying machine that mirrors the way in which hybrid cars save energy.

The achievements of the Partnership were recognised by the Technology Strategy Board, which awarded the highest possible grading of "Outstanding" to the Partnership.

What is KTP?

This Partnership received financial support from the Knowledge Transfer Partnerships programme (KTP). KTP aims to help businesses to improve their competitiveness and productivity through the better use of knowledge, technology and skills that reside within the UK Knowledge Base. KTP is funded by the Technology Strategy Board along with the other government funding organisations.

Each Partnership is a three-way collaboration between a business, a university and a highly talented graduate. The graduate carries out a strategic and innovative project for your business, with expert guidance from a university academic supervisor.



Access our expertise



Training and development



Attend an event



Hire our facilities



Secure some funding



Recruit our students

Business Results

Through the KTP, the company has acquired new knowledge of advanced computational methods and energy efficiency research to enable it to develop energy efficient solutions. A highly positive response has been received from the customer base. Scottish & Newcastle Brewery have recently installed six innovative low energy controlled drying units at their Royal Brewery in Manchester, with five more planned for Berkshire. Recent results have achieved a reduction in energy consumption of up to 60% on our Powerstrip machine.

As a direct result of the KTP, Secomak are raising their profile as suppliers of ultra low energy equipment to produce total drying solutions. Secomak exhibited its energy efficient industrial drying systems and capabilities at Brau Beviiale at the Exhibition Centre in Nuremburg, Germany. At this event, Secomak showcased its new energy saving Powerstrip drying system. Sustainable revenue streams have since been identified with major systems integrators such as Lorien (UK) and Kronos (Germany).

“The big advantage of this system is that it combines intelligent control which senses when products need to be dried, and the level of drying required. This works in a similar way to energy saving systems in hybrid vehicles and means that the energy consumption of our machine is directly proportional to the throughput of the product”.

David Dell
Product Development Manager,
Secomak Ltd

University Benefits

The university has benefited from the development of first-hand knowledge of limitations of Computer Modelling, alternative emerging technologies, such as high speed photography, and the development of alternative experimental techniques for such applications.

“As a result of this project, the company installed a fully functional ‘drying production line’ at the University. This not only facilitated development of final product for launch by the Company, it has helped spin off several taught undergraduate and postgraduate individual projects in computational fluid mechanics, and PhD research projects with related publications.”

Subsequent to this KTP project, the Company and the University have embarked on a second KTP to further develop the supply chain and marketing aspects of the business.

Petros Khoudian
Associate Dean, Faculty of Science,
Technology & Creative Arts

Graduate Benefits

“I gained a much deeper insight into the capabilities of various technologies and their limitations through the KTP. I completed a variety of professional training & development activities that have been used in my day to day work, including; CFD, Solidworks, Capital Equipment Sales training course and the Diploma in Management. Following the successful completion of the KTP, I secured employment with Secomak, as Capital Equipment Manager UK.

David Palmer
KTP Associate,
Secomak Ltd

Want to find out more?

Knowledge Transfer Team
University of Hertfordshire
College Lane, Hatfield
Herts AL10 9AB

Tel: 01707 286 406
Fax: 01707 285 136
Email: ktp@herts.ac.uk
Website: www.herts.ac.uk/businessservices