

Understanding Powders for Additive Manufacturing Technology Day

24th May 2016

9:30am - 4:00pm

Daresbury Laboratory, SciTech Daresbury, Keckwick Lane, Daresbury, Warrington, WA4 4AD

£50 Registration Fee (Debit/Credit Card Payment)

Additive manufacturing, or 3D Printing, is a transformative and potentially highly efficient manufacturing technique.

There is a wide range of AM processes and each demands a high degree of consistency in the feedstock in order to guarantee final product quality.

A comprehensive understanding of feedstock powders is therefore essential for achieving high productivity and optimising efficiency.

This 'Technology Day' provides guidance on selecting powders for AM and introduces powder characterisation technology required for such exacting applications.

AGENDA

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| 09:30am - 10:00am | Registration (Tea & Coffee) |
| 10:00am - 10:15am | Welcome & Introduction |
| 10:15am - 11:00am | Unlocking the Potential of Additive Manufacturing <i>Dr Jason Dawes - Manufacturing Technology Centre (MTC)</i> |
| 11:00am - 11:30am | Characterising and Optimising the Particle Size and Shape of Metal Powders for Additive Manufacturing <i>Dr Paul Kippax - Malvern Instruments</i> |
| 11:30am - 11:45am | Coffee Break |
| 11:45am - 12:30pm | Understanding Powder Behaviour for Additive Manufacturing Applications <i>Jamie Clayton - Freeman Technology</i> |
| 12:30pm - 1:15pm | Total Powder Management: The Importance of Powder Characterisation for Quality Control in AM <i>Dr Robert Deffley, LPW Technology</i> |
| 1:15pm - 1:45pm | Lunch (complimentary) |
| 1:45pm - 3:45pm | Practical Demonstrations by Freeman Technology, LPW Technology & Malvern Instruments |
| 3.45pm - 4:00pm | Wrap-up and Close |

To register your attendance please click [here](#).

Alternatively please contact - info@freemantech.co.uk or +44 (0)1684 851 551

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SPEAKERS



Dr Jason Dawes is Technology Manager - Powder Management at the **Manufacturing Technology Centre**. His role is in the technical management of highly innovative research projects involving powder based manufacturing technologies such as additive manufacturing, laser cladding and Hot Isostatic Pressing. He was awarded EngD from University of Birmingham in 2014 in the field of Chemical Engineering.

The MTC develops and proves innovative manufacturing processes and technologies in an agile, low risk environment, in partnership with industry, academia and other institutions. They focus on delivering bespoke manufacturing system solutions for customers.

MTC operate some of the most advanced manufacturing equipment in the world, and employ a team of highly skilled engineers, many of whom are leading experts in their field. This creates a high quality environment for the development and demonstration of new processes and technologies on an industrial scale.

www.the-mtc.org



Dr Paul Kippax is Product Group Manager - Laser Diffraction & Imaging at **Malvern Instruments**. A chemist and colloid scientist by background, he first joined Malvern Instruments over 18 years ago as a technical specialist working in the field of acoustics. In 2002 he moved into product management where he used his experience gained working in the pharmaceutical industry to guide the development of the Spraytec and Mastersizer platforms. Paul holds a degree in Chemistry and a PhD in Physical Chemistry.

Malvern systems are used to measure particle size, particle shape, zeta potential, protein charge, molecular weight, mass, size and conformation, rheological properties and for chemical identification, advancing the understanding of dispersed systems across many different industries and applications.

Malvern's products drive to exploit the latest technological innovations and are committed to maximising the potential of established techniques.

www.malvern.com



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Jamie Clayton is Operations Director at **Freeman Technology**. Based at the company's headquarters in Tewkesbury, he graduated from University of Sheffield with a degree in Control Engineering and is responsible for all daily activities of the company, including overall management of the administration, production, R&D, sales and customer support teams. Jamie also works with the company's clients to provide application based support.

Freeman Technology specialises in systems for measuring the flow properties of powders and has over 15 years' experience in powder flow and powder characterisation. The company invests significantly in R&D and applications development, and provides detailed know-how to support its range of products. Expert teams guide and support customers around the world in addressing their individual powder challenges, focusing on delivering the most relevant information for the process.

www.freemantech.co.uk



Dr Robert Deffley is Research & Development Manager at **LPW Technology**, and is responsible for management of LPW's programme of R&D projects and technical applications relating to metal powder processing. Robert has a Master's Degree in Materials Science and Engineering from the University of Sheffield. He also earned a PhD from the same university for work in materials development in AM. Robert has worked, while at LPW, with leading Aerospace and Medical OEMs through collaborative R&D projects in the UK and Europe to deliver metal powder solutions which enable end users to exploit AM.

LPW are the global market leader in developing, manufacturing, and supplying cutting-edge metal powder solutions for Additive Manufacturing (3D printing).

LPW's unrivalled wealth of knowledge and experience reassures customers in the tooling, aerospace, industrial gas turbine, automotive, and medical implant manufacture industries of the best possible products and support.

www.lpwtechnology.com