

An Introduction

The Materials Processing Institute is a technology centre for organisations involved with or interested in materials, materials processing and energy. The Institute specialises in challenging processes, particularly those involving high temperatures, hostile environments and hard-won skills.



The Institute offers the expertise, physical capabilities

and physical assets that enable its customers and

collaborators to explore and develop new materials

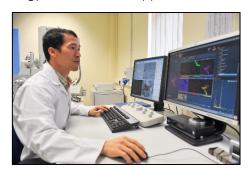
and processes; improve existing products and

processes and realise lasting improvements in energy

efficiency and process reliability, whilst reducing the

environmental impact of their processes.

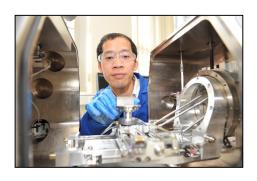
The Institute's experienced and capable team of engineers and scientists are supported by strong links with leading universities and technology providers enabling the delivery of cutting edge process technology and technical support.



The institute offers the following to its clients:

Provision of Process Support

Using the Institute's experience with large items of process plant and equipment operating in hot and hostile environments, the Institute's engineers and scientists are able to provide forensic insight into complex process and plant problems, with an enviable track record of delivering simple, robust solutions to complex engineering problems.



The Institute is based on purpose-built laboratories with facilities over a range of scales from fundamental laboratory scale experiments through to the construction and operation of demonstration scale pilot plant. This allows the Institute's clients the opportunity to work at any stage from the fundamental idea or innovation, through to commercial technology delivery. These assets are supported by its dedicated team of engineers and scientists, who are industrial problem solvers, with experience across a wide range of industries and industrial processes.



Materials and Metals Industry Consultancy

Consultancy in support of both process and product developments across the full Materials and Metals industry supply chain, including the provision of pilot and demonstration facilities to evaluate and demonstrate new process or product developments and to test new materials and equipment.

Pilot and Demonstration Facilities

Fully serviced space for large and complex pilot process equipment to allow the Institute's clients to reduce the risks associated with new process and product development with pilot and demonstration scale operations, off line, and away from production.



Iron and Steelmaking Process Technology

With roots in the UK Iron and Steel industry, the Institute provides process support and technology development to a number of the world's leading steelmakers and equipment suppliers.



Supporting Science

Complementing the services described, the Institute has extensive capabilities in mathematical and physical modelling; thermodynamic modelling; mineral, metallurgical, thermodynamic and analytical laboratories.



Specialist Melting

The metals and related industries are supported by tonnage scale metal melting and refining capabilities, ranging from 10 kg to 7000 kg per heat, with either conventional ingot or continuous casting of the final product. These facilities are both process development 'laboratories' in themselves and also fully capable of producing small specialist melts and trial quantities in a wide range of metals and alloys.

Building for the future, the Institute has created two additional facilities to further support growth in the materials sector.

The SME Technology Centre

Helps SMEs to grow by providing a tailored package of support. Assistance includes technical support (e.g. engineering expertise, scale-up, process improvement, technical mentoring), facilities support (e.g. equipment access, piloting, laboratory space, office and conference facilities) and business support services and signposting (e.g. grants, networks, potential partnerships).



The Doctoral Academy

Hosts students and provides mentoring and access to specialist expertise and facilities, nurturing research experts to deliver innovation for industry. Creates opportunities for closer alignment of academic research by connecting doctoral students, metals and materials industries, universities and SMEs. The academy also promotes debate and discussion with policy-makers on strategic developments of doctoral education to support the metals and materials sectors.

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