



**Materials  
Processing  
Institute**

1944 - 2014  
**70**  
YEARS OF  
INNOVATION

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# The Materials Processing Institute

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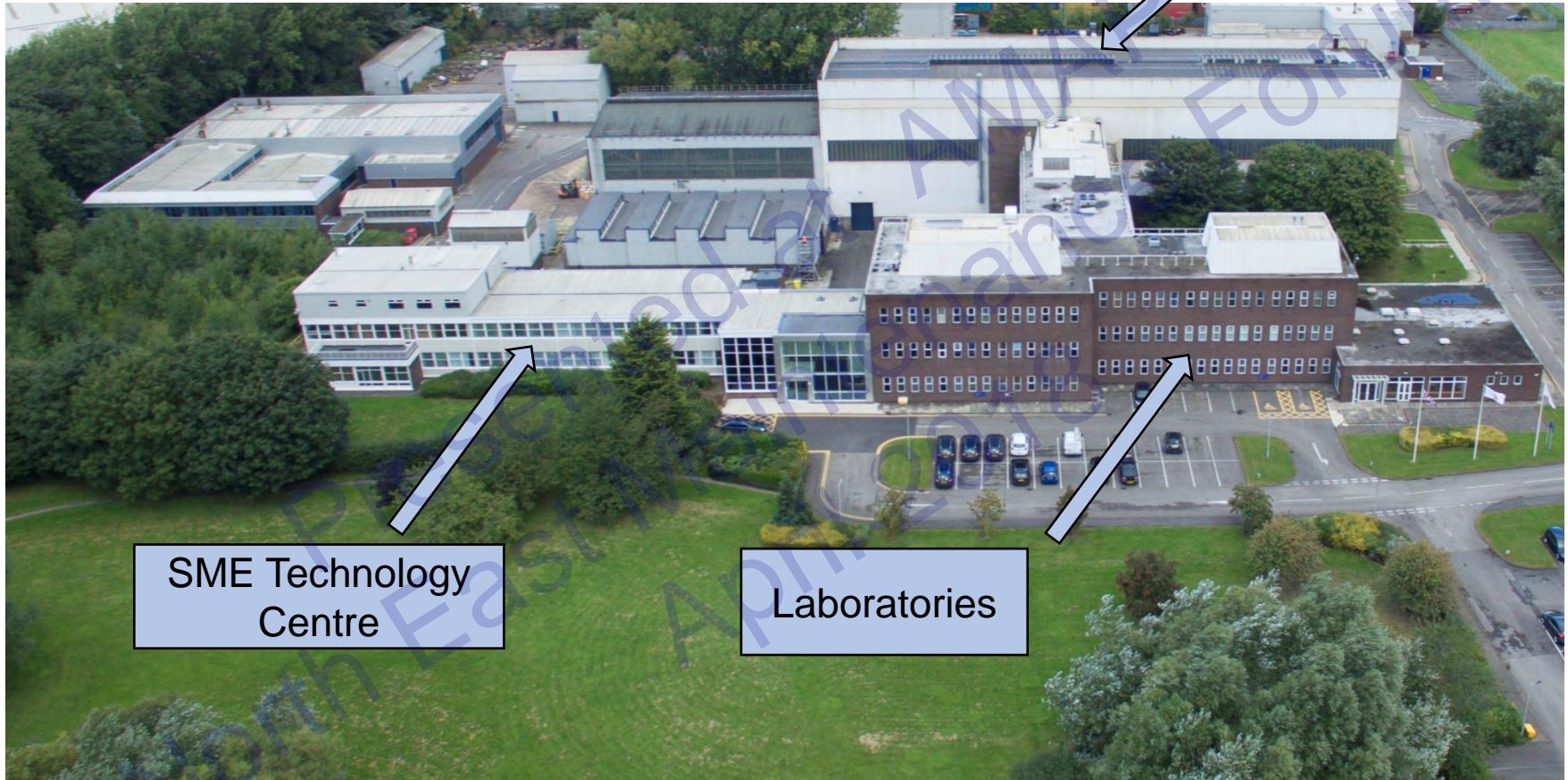
Excellence in Materials & Process Innovation

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# Materials Processing Institute

Pilot Plant





Materials  
Processing  
Institute

**BISRA**

Materials  
Processing  
Institute

2014

BISRA  
1944



Tata Steel  
2009

British Steel Corp  
1967

Corus  
1999

British Steel plc  
1987



Materials  
Processing  
Institute



# Overview

The Materials Processing Institute is independent and not-for-profit.

- 100% of profits invested back in the business
- Societal and ethical mission supporting local community
- The Institute is an 'open access' facility. It is not restricted to its 'members'

The Institute carries out industrial research and development in:

- Advanced materials
- Low carbon energy
- The circular economy

The Institute works with:

- SMEs locally
- Industrial and Academic Partners regionally and nationally eg. NEPIC, Teesside University, Digital City, Innovate UK
- The materials industry nationally
- The steel industry internationally

# Our Funding

1. The Institute has a revenue turnover of approximately £5.8M per annum, employing 86 staff, plus a number of associate consultants. This income is almost entirely (>90%) from the private sector and is a combination of long term structured programmes, collaborative research projects and fixed price contracts.
2. In the last two years the Institute has invested more than 3M in capital and infrastructure. This funding is almost entirely from the public sector (UK national and regional Government).
3. The Institute operates an SME-Technology Centre with a turnover of approximately £300,000 per year. It is 50% funded by the private sector and 50% by the public sector.

# Services

## 1. Research Services

- Private, or collaborative research programmes
- Specialist testing, e.g. product failure analysis

## 2. Consultancy

- Technical due diligence
- Capex due diligence
- M&A support (e.g. market or technology assessment)

## 3. Training

- Bespoke, specialist courses and standard Institute courses

## 4. Specialist Melting for clients in the UK and overseas

## 5. SME TEC offices and laboratories and innovation support

## 6. Library & Information Services

- Patent, IP, literature searches, literature searches

# Supporting Science

Extensive capabilities in mathematical or physical modelling; thermodynamic modelling; mineral, metallurgical and analytical laboratories and associated techniques and technologies.

- Experimental and Computer Modelling
- Thermodynamics
- Instrumentation and Control
- Materials Microscopy
- High Temperature Materials
- Chemical Analysis
- Materials Testing





# Capabilities

- Working on innovation projects in collaboration with partners, to improve productivity, new product and new technology development.
- Supporting supply chain development and assisting innovate business through SME Technology Centre
- Co-ordinating partnership links with UK universities , Government agencies and innovation centres
- Funding opportunities – Maximise UK and EU funding, including: R&D Tax Credits, Advanced Propulsion Centre (APC), Innovate UK,...



# Summary of Capability

- Expertise, capabilities and assets to enable clients to:
  - **Explore and develop new materials and processes, and improve existing ones**
  - **Improve process reliability**
  - **Realise lasting improvements in energy and raw materials efficiency**
  - **Enable reduction or reuse of waste**
  - **Reduce the environmental impact of processes**
- Technical and engineering capability backed up with large scale pilot and demonstration facilities, where concepts are developed and proved.
- Supported by engineering, process simulation, modelling and laboratory services.

# Specialist Metal Production



Metal melting, refining and casting facilities for new product development or process improvement.

Small batch or trial quantities (10kg to 7 tonnes) of a wide range of metals and alloys.

# Thank You

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