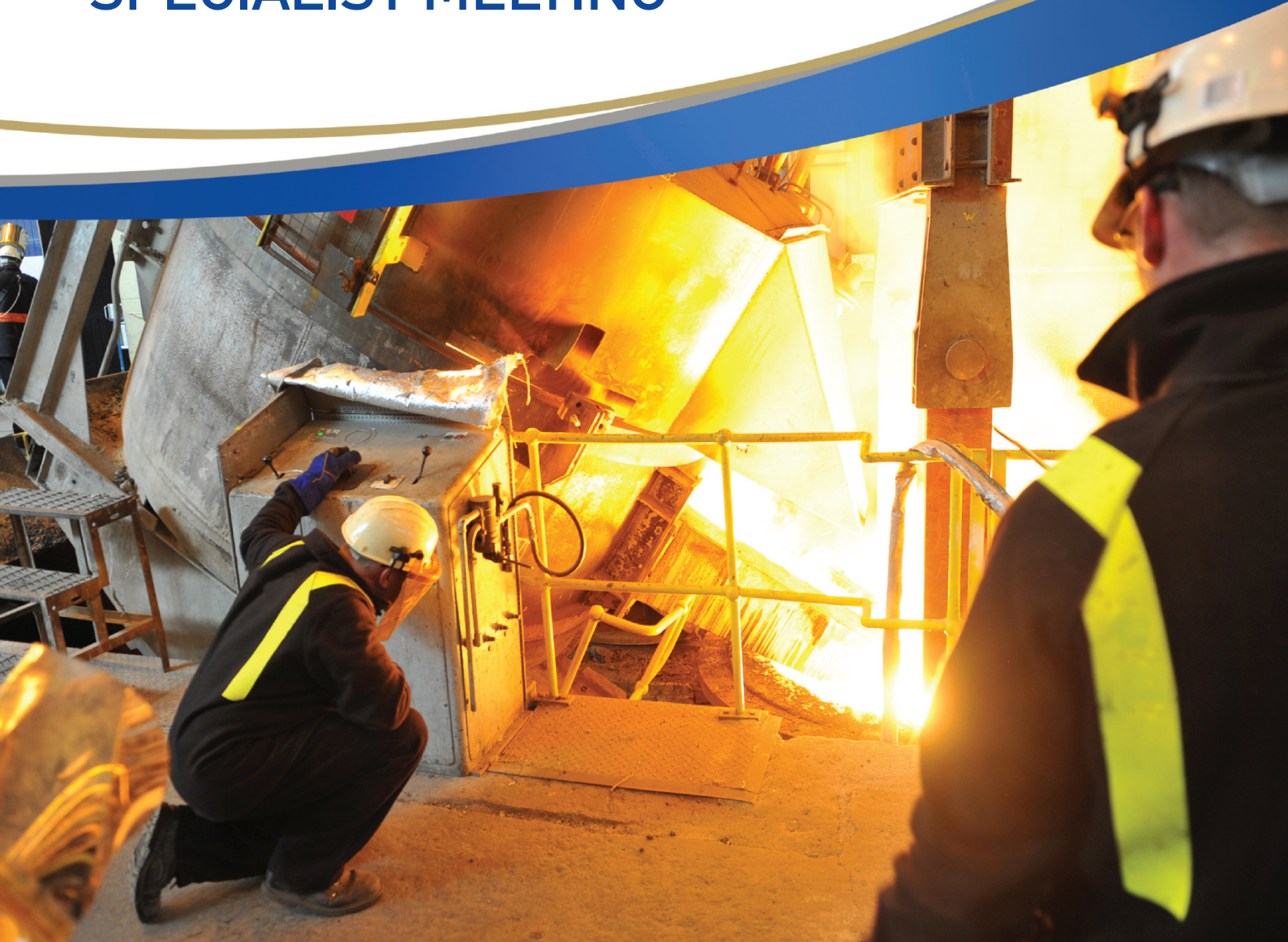




Materials
Processing
Institute

SPECIALIST MELTING



Specialist Melting

High quality steel manufactured to client specifications



SPECIALIST MELTING AND CASTING

- > 5 tonnes and 6 tonnes batch sizes, reducing working capital for processors and stockholders
- > Made to client specifications
- > Short lead times
- > High levels of quality and precision, particularly cleanness
- > Client support from the wider Institute for expert advice and analysis
- > Competitively priced
- > Manufactured in the UK

The Materials Processing Institute offers a range of steel alloys and revert melting services. Product is available as ingots up to 6 tonnes, including for specialist applications in sectors such as nuclear, defence, offshore, aerospace, automotive and engineering.

Expertise is in melting, alloying and casting of semi-finished product, produced at the Normanton Plant. A complete service is available, including downstream processing.

Steel alloys are manufacturing to customer specifications, to short lead times and with a high degree of cleanness, using vacuum degassing and argon purging.



PRODUCTS

- > Carbon steels
- > Alloy steels
- > Stainless steels

Available as:

- > 5.0 tonnes square ingot
- > 5.9 tonnes square ingot
- > 6.0 tonnes slab ingot

Smaller batch and cast sizes are also available on request, particularly suitable for revert melting.



Specialist Melting Capabilities

Facilities and equipment for the manufacture of special steels

FACILITIES

Advanced steel processing technology and facilities produce bespoke steel alloys in cast sizes up to 6 tonnes. Smaller furnaces for specialist applications and sand casting facilities are available, these are particularly suitable for revert melting.

The primary melting facility is an electric arc furnace. Secondary steelmaking facilities include a ladle furnace and vacuum tank degassing, enabling a wide range of steels to be produced from conventional carbon/manganese grades, through to complex, multi-alloy stainless steels.



Process control is achieved through sample analysis and optical emission spectroscopy to continually update the alloy composition in the melt. The Normanton Plant is supported by a suite of analytical laboratories for both metals and slags, including scanning electron microscopy (SEM).

Ingots are bottom filled using a trumpet and runner arrangement and can be purged and shrouded with inert gas.



REVERT MELTING

Revert melting allows the recovery of valuable by-products. The resulting scrap and processing materials can be re-melted into a custom form of size, shape and weight, suitable to be re-used as a raw material according to client requirements.

ASSAY MELTING

An increasingly popular service for scrap suppliers and metal producers, assay melting allows for accurate and independent analysis of as-supplied scrap. This is essential for both optimum process control and to assure the agreed specification of scrap supplied under a commercial contract. The ability to melt a 6 tonnes charge ensures that a truly representative sample of the scrap can be achieved and independently verified.

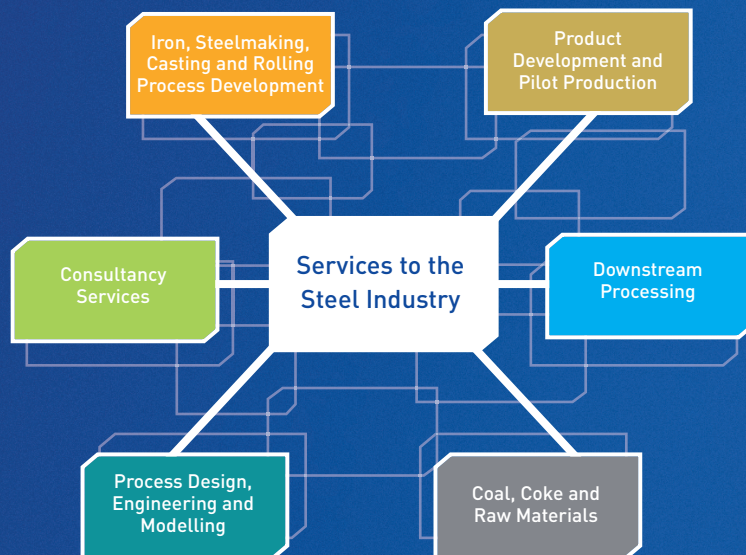
CLIENTS AND MARKETS

A wide range of clients and markets are supplied, including forging operations, rolling mills, stockholders, supply chain management companies, engineering companies, steel manufacturers, rod and bar drawers, wire manufacturers, extrusion companies and recycling operations.

Geographical markets include the UK and Europe. End-use markets include nuclear, defence, engineering, aerospace, marine and automotive.



Providing Facilities and Expertise



EXPERTISE AND CAPABILITY

The commercial manufacture of steel alloys draws on decades of expertise in developing new and unconventional steel alloys for sectors including rail, defence and automotive. The steel processing expertise of the wider Institute includes sophisticated modelling, measurement and control technologies.

VISIT THE INSTITUTE

Many clients value the opportunity to visit the melt shop and see steel being made. Clients and prospective clients are always welcome to visit, to discuss their potential requirements and learn more about the steelmaking process.



**Materials
Processing
Institute**

Materials Processing Institute
Eston Road
Middlesbrough
TS6 6US
United Kingdom

+44 (0)1642 382000
enquiries@mpiuk.com
www.mpiuk.com

