

Electric Arc Furnace Transition Delivery

Unique, integrated assets and capabilities that de-risk transition delivery, optimising production and supply chains, enhancing decarbonisation, and maximising financial returns.



**Materials
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Institute**

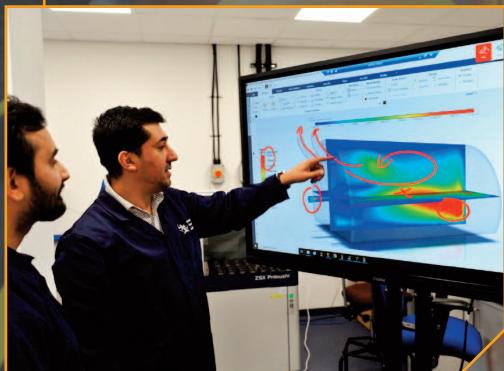
Delivering significant value throughout the entire EAF plant project and operational life cycle using our differentiated customer offer:

UNIQUE PILOT SCALE PRODUCTION AND LABORATORY ASSETS

- Seven tonne EAF demonstrator plant
- Slab and ingot casting
- Reheat furnaces
- Rolling mill
- Comprehensive range of testing and analytical assets, including cutting edge digital and scanning electron microscopy.

UNDERPINNED BY WORLD CLASS SCIENTISTS AND ENGINEERS

A diverse team of scientists and engineers with decades of commercial scale EAF operational and technical expertise.



COMPREHENSIVE LIFE CYCLE ANALYSIS AND EVALUATION

Project Feasibility

Evaluate plant design, technology options and technology provider assessment in order to optimise CAPEX and operational performance, and so de-risking overall project delivery and investment.

Leading Capability in Steel Grade Development

Detailed material characterisation, with optimisation of chemistry, and system thermodynamics using cutting edge modelling and integrated AI capabilities.

EAF and Auxiliary Equipment Optimisation

Minimise energy consumption, life cycle assessment, value in use, cleanliness performance, digitisation, maintenance, refractory and operational safety performance.

Decarbonisation Innovation

Explore opportunities to reduce carbon footprint and associated financial exposure including decarbonised heating, fuel conversion, routes to low carbon fuels and feedstocks including biochar and hydrogen reduced iron.



Waste Stream Monetisation

Identify technologies delivering slag conversion into valuable carbon neutral composite materials.



Expert Training

Provide by EAF specialists through plant installation, commissioning and operation.

Supply Chain

Provide commercial, operational and technical, assessment and qualification of input materials and supply chains, including rapid scrap analysis.

Process Flow Optimisation

Including ladle fleet tracking and management.

Troubleshooting

Supporting plant startup to steady state operation.



Materials and Process Innovation for a Sustainable Future



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Green Steel Centre



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EAF Links