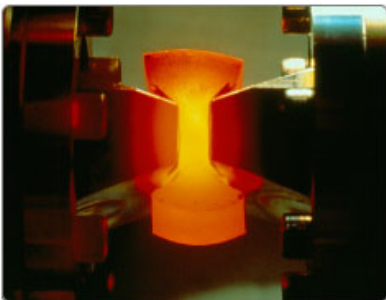


Our research on ferrous alloys has been ongoing for 30+ years, involving advanced alloy design, new continuous casting methods, controlled thermomechanical processing through to net-shape processing (3D Printing).



Gleeble Thermal and Mechanical Simulator

## More information

### Professor Michael Ferry

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# Design of new steels and processes

Physical Metallurgy Group – School of Materials Science and Engineering

## Competitive advantage

- Our research involves the development of new types of steels, produced by conventional & direct strip casting through to additive manufacturing.
- Our extensive expertise in physical metallurgy and metals processing enables us to carry out world class research on most classes of alloys.

## Recent research projects

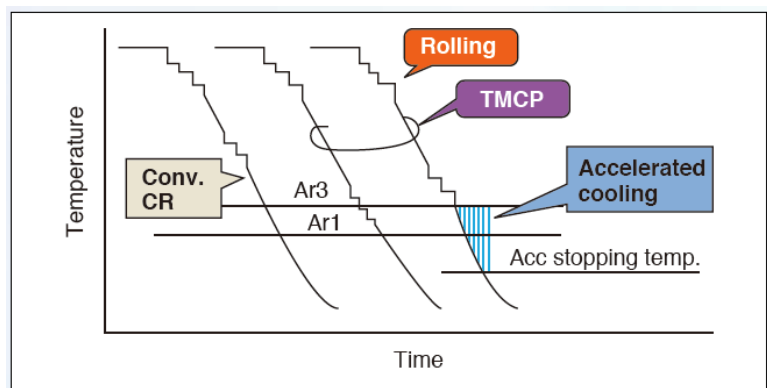
- Development of corrosion resistant austenitic & duplex stainless, high strength low alloy and ultra-low carbon steels, ausferritic cast irons etc.
- Advanced high-speed casting processes for steels
- Thermomechanical processing and structure/property optimisation
- Additive manufacturing of carbon and stainless steels

## Successful applications

- Our work on duplex stainless steels has identified new compositions.
- We have worked for 20+ years on advanced strip casting through to controlled TMP to generate new and advanced steel products

## Facilities and infrastructure

- Gleeble 3500 thermomechanical simulator, hot/cold rolling
- Additive manufacturing capabilities (3D printing), SPS and HIP etc.
- State-of-the-art property testing & characterisation facilities



## Our experts

- Professor Michael Ferry
- Dr Wanqiang Xu
- A/Professor Jianqiang Zhang
- Dr David Miskovic

