

Rapid Alloy Prototyping: A Prosperity Partnership



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Rapid Alloy Prototyping
A PROSPERITY PARTNERSHIP

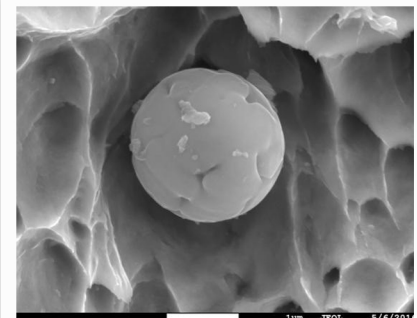
Bringing a step change in pace and creativity in novel alloy development and commercialisation.

Summary

Future advances in key manufacturing sectors rely on new, innovative steel products. A successful steel industry must be able to deliver such innovation quickly to satisfy customer requirements and grow its business.

The conventional steelmaking innovation cycle is slow and iterative, requiring expensive trials using hundreds of tonnes of material, representing significant financial risk and limiting opportunities to investigate radically different alloys with disruptive solutions. Imagination and creativity are therefore inhibited.

The EPSRC Rapid Alloy Prototyping (RAP) Prosperity Partnership will implement a high-throughput RAP process, allowing for accelerated innovation and creativity. The process will provide rapid screening and ranking for promising new alloys leading to quicker promotion from lab-scale (20g) samples to progressive upscaling and ultimately, full scale manufacturing trials.



Utilising state of the art imaging, computational modelling as well as the RAP and pilot facilities, the project will also generate novel alloy and coating compositions, explore the effect of increasing the use of scrap and carrying out advanced metallurgical investigations.

Aims

- To accelerate alloy development through delivering novel prototyping solutions
- To create and implement a new innovation cycle, binding industry and academia together
- To create a Rapid Alloy Prototyping methodology validated for key steel processing steps that will allow the developmental process to be short-circuited

Funders



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Find out more

Website: www.rapidalloyprototyping.co.uk
(website will be live from March 2020)

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