

HIPERMAT

BB-01-2016

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Full Title: Advanced design, monitoring, development and validation of novel High PERformance MATerials and components.

Aim:

The main objective of the HIPERMAT project is to empower future low carbon technologies, like hot stamping, by incorporating high performance materials and components in processing furnaces. That way, environmental impact reduction is enhanced acting over the whole value chain, from furnace component manufacturers to O.E.M., including furnace constructors and automotive component providers.

Concept:

The sustainable target of the project can be overcome by generated synergies between Key Enabling Technologies represented by:

- Advanced materials: such as refractory stainless steel with new alloying elements, high entropy alloys, and superalloys.
- Advanced manufacturing technologies: such as LMD, application of ceramic coatings and hydrosolidification (ablation technology).

Combined with ICT technologies such as:

- Embedded sensors for continuous monitoring of high temperature and corrosive environmental industrial conditions.
- Modelling software to speed up the design, selection and validation of the best material and process performance conditions.

Start date:

01/11/2020

End date:

31/10/2023