

Materiali

PARTNER SEARCH NMP7-EU-SMCP-1

01 dicembre 2017

Oggetto: PARTNER SEARCH NMP7-EU-SMCP-1

Un consorzio con a capo un coordinatore irlandese sta cercando con urgenza un partner industriale per la seconda fase di presentazione della proposta.

Il progetto è relativo al Topic NMP-2007-2.5-2 Modelling of microstructural evolution under work conditions and in materials processing.

Contattare maracchia@apre.it, facendo riferimento al codice in oggetto.

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<Reference n.: NMP7-EU-SMCP-1 >

<Deadline: 06/09/2007 >

<Programme: >

<Project Title: Modelling of microstructural evolution under work conditions and in materials processing >

<Financial Scheme: >

<Description: Technical content/scope: Modelling of material performance has nowadays become a very powerful tool, complementing experimental research. The simulation of the microstructural evolution of materials properties and phenomena that determine the macroscopic material response under working conditions and during materials synthesis and processing (e.g. in hot deformation, mixing, injection moulding, filament processing, laser processing, near to shape production) can enable the achievement of major improvements in materials design and life cycle assessment. Modelling approaches are expected to build on the link between microstructural evolution and specific macroscopic material properties and take advantage of the new multi-scale approaches. Essential reduction of costs and energy

consumption for new materials development and industrial processing is expected. The experimental validation of the modelling approaches is also expected to be part of the projects. >

<Organisation Type: Altro>

<Partner Sought: Profile of Company sought to join consortium

A European metals company of any size involved in solidification processing (e.g. casting or welding), or provision of ingot for same, which would benefit from the development of advanced alloys and processes, to add more value and to gain new markets. The focus should be on aluminium alloys although steels will also be considered as candidate materials. Could be in the automotive, aerospace, bioengineering, defence, or general engineering sector.

What is the role of the company in the project?

The company will be engaged in Research and Technological Development and/or Demonstration/Early Stage Commercialisation, relating to new highly accurate multi-scale computer models of multi-component alloy solidification being developed within the project activities, e.g.

via: full scale through-process modelling; full scale experimental validation; structure optimisation and scrap reduction; new alloy/process evaluation

What will the company get out of the project?

Improved materials, processes and markets. Higher value added castings and weldments free of defects such as hot tears, macrosegregation and porosity. The ability to engineer microstructure into solidified components. Optimum composition and microstructure for successful heat treatment and high performance. A validated software tool to further develop technical capabilities, including the skills to generate new environmentally friendly products. Access to a high level of European expertise in development and validation of computer models of alloy solidification across the length scales of interest, up to and including the macro-scale.