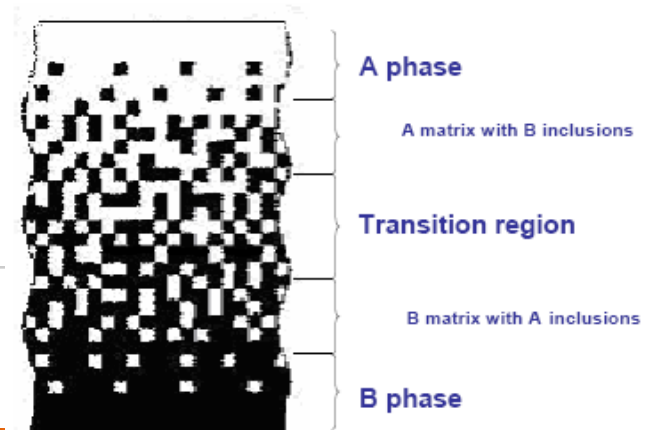


Project idea

GradClad

Graded materials with laser cladding

- Materials and Micro-Nanotech, New Production Technologies
- Complete production chain for metallic graded material parts fabrication by additive technology.
- Applications in the aeronautic, mechanical, medical and chemical sectors.



Idea Description

-Develop complete processing chain for manufacturing FGM parts

Thermal – Mechanical – structural (porosity)

- 1. Software development :

- Format file including material information inside the volume.
- Software tools for FGM 3D modelling
- Combined design of geometry and internal material topology

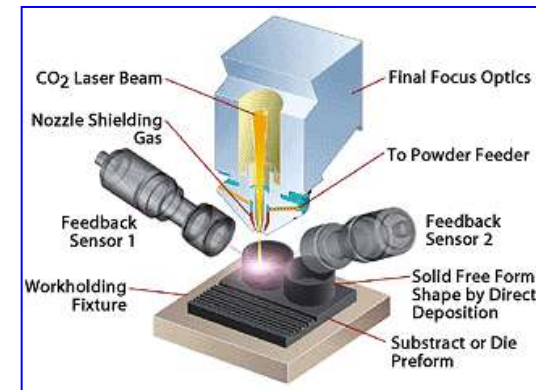
- 2. Building process mastering

- Functioning parameters
- Materials combination (Ti alloys, steel + Cu, ...),
- Post machining/treatment of FGM parts (accuracy, surface quality)

-3. Industrial case studies

• Results :

- Operational process (hardware/software)
- Validation for a range of application



Your competences / Background expertise

Existing partnership :

- Sirris + Vito (process and material dev.)
- Delcam (software for FGM process)
- Irepa Laser (cladding hardware system & nozzle manufacturer)
- Materialise (software for graded structures)
- Open engineering (Simulation of the cladding process)
- TWI (FGM proposal 2008)
- Prodintec (Post Machining of FGM – national project)
- Univ Maribor (LENS Optomec process)

Looking for...

... SME or large companies: end users
Aerospace, mechanical, medical,
chemistry sectors

... Suitable call (!)

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