

REALIZATION OF INNOVATIVE CERAMIC COMPONENTS AND MATERIALS FOR THE MANUFACTURING INDUSTRY

Innovations and Benefits - The use of HDE welding processes allows productivity increase, distortion reduction and increased energy efficiency in welded constructions and in similar processes of surface carryover and repair.

Uses - Materials and components for the following industrial sectors:

- automated machines
- energy production and recovery
- automotive
- anti-ballistic protection systems
- biomedical

Past and Present Activities - Development of materials based on silicon carbide for the construction of prototypes of heat exchangers.

Realization of braking components for the automotive sector.

Development of zirconia-based materials for the dental sector and for the orthopedic prostheses sector.

Qualification of the industrial production process of components for the automotive sector.

Activities carried out in European or national projects.

Collaborations with industries: Bart, Brembo, CeramTec, Ghimas, Kira Technology, Meccanotecnica Umbra, Rauschert Italia.

Patents: IT0001323827 - Procedure for joining ceramic materials, in particular ceramic materials based on silicon carbide; IT0001362972 - Process for the realization of sintered material based on silicon carbide and aluminum nitride; IT0001407390 - Ceramic material for dental prostheses.

