



Advanced Powder Technology IX

Edited by
Francisco Ambrozio Filho and Aloisio Nelmo Klein

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Advanced Powder Technology IX

Selected, peer reviewed papers from the
Ninth International Latin American Conference on
Powder Technology (PTECH 2013),
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Francisco Ambrozio Filho and Aloisio Nelmo Klein



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FOREWORD

The Ninth International Latin American Conference on Powder Technology – PTECH 2013 – took place at Campos do Jordão, São Paulo, Brazil, from 27th to 29th of October 2013. The mountain in the hosting city, located 167 km from São Paulo, created a peaceful spirit with good spring climate. The Organizing Committee had support from the ABC (Brazilian Association of Ceramics) and IPEN (Nuclear and Energy Research Institute) researchers for technical issues as also had support from the Metallum Eventos Técnicos e Científicos facilitating the stay and conferences. Gathering more than 170 participants among researchers, graduate students, professors and market specialists coming from six countries (Brazil, Italy, Spain, Germany, USA and China) the PTECH has proved to be once again an important forum to discuss the challenges, the latest developments and market opportunities.

Differently of the previous editions, the schedule of the PTECH 2013 was organized in four main themes: Synthesis, Processing, Properties and Application. Three topics were nominated for each main theme as following: Synthesis: Mechanical Alloying; Metal Matrix Composite; Nanomaterials; Processing: PM Compacting; MIM and Rapid Prototyping; Plasma Assisted and Spray Forming; Properties: Sintering and Heat Treatment; Corrosion Properties; Mechanical Properties; Application: Wear Resistant; Biomaterials; Magnetic Materials. Each topic been conducted as a technical session during the Conference.

Focused on Powder Metallurgy (PM) and Metal Matrix Composites, but not in ceramics, this edition aimed at providing a better outlook of the current state of the PM scientific and technological development in Latin American. In view of this and aiming to undertake a high quality Conference, the coordination of the technical sessions and the scientific paper review were carried out by a group of twelve invited professionals, called Session Chairmen. Each member of this group appears as a chapter Editor and Reviewer on this book respective to technical session.

The achievement of this Conference was furthermore feasible due to those companies that generously sponsored the PTECH 2013 and without whom we would not have been able to offer such a heavily discounted for delegate fee. Our sincere thanks for these important players! Also, many thanks for the delegates, many of whom travelled a considerable distance to be at the Conference and who all participated fully and enthusiastically to the success of the PTECH 2013. Hope we can meet again at anniversary edition – PTECH 2015 – Tenth International Latin American Conference on Powder Technology.

São Paulo, October 2013.

Nério Vicente Jr.

Conference Co-Chairman and Organizing Committee Manager.

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