Latest Developments and Trends for the Industrial Application of the FAST/SPS Technique

René KIRCHNER – FCT System

René Kirchner (Head of Sales), Tobias Kessel (Managing Director Technology & Development), Dr. Jürgen Hennicke (Head of Research & Development)

At our location in Frankenblick - in the Thuringian Forest – we, FCT Systeme GmbH, conceptualize and manufacture high-temperature plants with more than 30 years of expert knowledge for the production of high-performance materials, e.g. non-oxide composites and substances.

FCT Systeme invests extensively in research and development. The consequent improvement of best practice concepts is thereby as important to us as the development of new plant types regarding the increase in efficiency, particularly.

Our employees are continually devoted to improve and redevelop trendsetting plant concepts and sintering processes in our in-house technical center. To our project partners from industry and research we offer the opportunity to concentrate and use combined knowledge in confiding collaborations.

Thereby and due to a directed development of new technologies as well as close collaboration with our sister companies and project partners, we are able to offer comprehensive system solutions. Those include among others individual tests for process optimization purposes as well as test series in our in-house technical center. Additionally, we are able to offer complete solutions up to the finished sintering plant.

In the past two decades, the Field Assisted Sintering Technique (FAST), also known as Spark Plasma Sintering (SPS), has been successfully established for rapid sintering applications. The scientific results gathered in the past in the area of R&D were implemented step by step in practical industrial applications. Together with a multiplicity of industrial partners and based on its own R&D activity with practical applications at its in-house technology centre FCT Systeme GmbH was able to implemented this knowledge in the past years successfully in customized plant concepts. Exclusive examples will be introduced and future prospects regarding the trend of development will be illustrated.