

ECerS-Conference July 9–13, 2017, Budapest/HU

Joachim Heym
Managing Director

Schunk Ingenieurkeramik GmbH
Hanns-Martin-Schleyer-Str. 5
D-47877 Willich/Germany

Phone: **49 / 2154 / 497 – 100
Fax: **49 / 2154 / 497 – 102

e-mail: Joachim.Heym@schunk-group.com

Abstract on topic:

„Additive Manufacturing of complex, large volume Components of Technical Ceramics for Plant Engineering

Joachim Heym

Though “rapid prototyping” has already been in practice for many years, the public interest is steadily increasing, finally due to 3-dimensional printing equipment available for private purposes. Besides being applied on the level of “home-mechanics” its industrial use is – considering the materials processable - . till now still restricted primarily to the production of demonstrative or functional prototypes resp. for mould building scopes.

But only a nearly unlimited variety of shapes combined with suitable materials applicable may qualify 3-D-printing for the production of construction elements and components for plant and machine engineering. Thus “rapid prototyping” will turn into “rapid manufacturing”.

Intense R+D-activities of Schunk Ingenieurkeramik GmbH generated a procedure for the production of parts from an approved high-performance ceramic grade, which so far – due to complexity and size - could not be realized in traditional ceramic manufacturing processes. Printing and firing technology currently stipulates the outer dimensional limits to 4 m x 1 m x 1 m. Ceramics disclose completely new fields, e.g. for industrial precision measurements or product engineering. Even parts applied for heat treatment in metallurgy, in iron, steel, ceramics and glass industries as well as components for energy conversion in environment- and resource-conserving plants have already been produced.

January 19, 2017