# Press Release

**Kontakt**

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## 3D-printed ceramic components

**IntrinSiC – A unique innovation from Schunk Carbon Technology**

**At this year's Thermprocess trade show, the world's most prominent professional show for industrial thermal process technology, Schunk Carbon Technology will be presenting a brand new innovation. IntrinSiC is the first product to enable the manufacture of complex monolithic components from extremely hard and dimensionally stable silicon carbide ceramic via 3D printing.**

June 16, 2015 – The production of three-dimensional products with a printer has been likened to an "industrial revolution" by some observers. With IntrinSiC, Schunk Carbon Technology has made a breakthrough in this seminal high-tech field. This is the first product capable of producing ceramic constructional elements, one of the hardest materials available. "We have developed a new process where components can be produced from the ceramic material silicon carbide through 3D printing, which
wasn't possible in the past because of the components' complexity and size," explained Dr. Arthur Lynen, who heads up development of the product at Schunk Carbon Technology.

It enables the trouble-free creation of complex undercuts and hollow spaces for uniform (monolithic) and large-sized constructional elements using ceramics. Thanks to its extreme dimensional stability, IntrinSiC is especially attractive to manufacturers of components which have to exhibit especially high rigidity and strength. The ceramic material, which is nearly as hard as diamonds, yet relatively lightweight, hardly expands at all when exposed to high temperatures and exhibits extreme dimensional stability (unlike other materials such as steel). "Using traditional production processes like casting, pressing and pultrusion, individual shaping in top-notch quality wasn't possible," commented Dr. Arthur Lynen. IntrinSiC gives customers from a wide variety of industries completely new options in the area of industrial precision and measuring technology.

The process begins by mixing powdered silicon carbide with a binding agent. Using CAD structural data, a 3D printer then models the desired component layer by layer. Sizes of 1.5 x 0.7 x 0.7 meters are possible here. Following special pretreatment, burning and finishing, the product is ready. The process is much faster and the amount of material used is less in comparison to conventional technology.

Schunk Carbon Technology will be presenting its product and service offerings at the Thermprocess trade show at Stand 9C42 in Hall 09. Thermprocess will be held from June 16th through the 20th at the exhibition grounds in Düsseldorf, Germany.

(2,637 characters including spaces)

**Pictures:**

IntrinSiC Wuerfel.jpg: IntrinSiC is the first product capable of manufacturing constructional elements made of the ceramic material silicon carbide, one of the hardest materials available.
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**Schunk Group**
The Schunk Group is an internationally operating technology company with over 8,000 employees in 29 countries. The company offers a broad spectrum of products and services in the fields of carbon technology and ceramics, environment simulation and air conditioning technology, sintered metal and ultrasonic welding. Turnover of the Schunk Group was around €990m in 2014. The Schunk Group has bundled its expertise in the development, manufacture and application of carbon and ceramic solutions in the Schunk Carbon Technology Division.