

3DCeram: New Investments to Support the Development of 3D Printing

3DCeram develops unique expertise in 3D printing dedicated to ceramics. Based in Limoges/FR the company was quick to offer an on-demand production service and formulations, then, since mid-2014, an SLA 3D printer. Today, it is increasing its production capacity by investing in an additional production line, and it is rising R&D effort to develop new formulations, thanks to Region Limousin support.



Fig. 1
3D printing unit CERAMAKER

Introduction

Richard Gaignon and Christophe Chaput, associate directors of the company, are ceramics experts. They defend the colours of ceramics using 3D printing. Complementing other traditional production technologies, it makes ceramics more accessible, by reducing production costs and time to market: the growing success of the company's on-demand production service confirms this, be it for parts with complex architecture or to produce one-off parts or mini-production runs. 3DCeram is increasing its production capacity by investing in a new CERAMAKER 3D printer, a paste preparation line, and debinding and sintering furnaces.

Recent investments

The CERAMAKER printer developed by the company (see CERAMIC APPLICATIONS 2 (2014) [2] 12) uses new developments to simplify the stages of paste loading and

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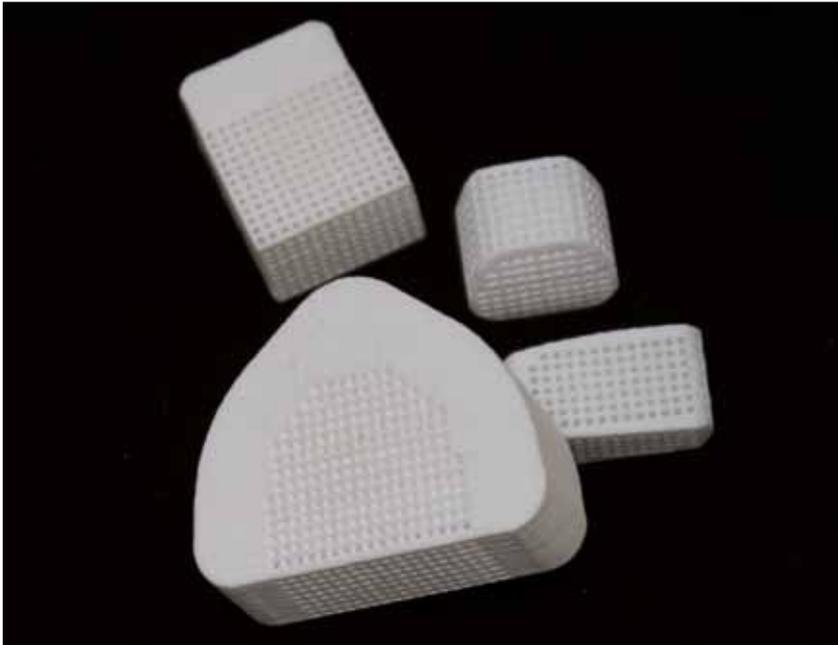


Fig. 2
Complex-shaped biomedical ceramic components made by 3D printing



Fig. 3
Unique artistic design made by 3D printing

paste feeding into the work tray. Optimizing these stages makes it possible to considerably decrease material consumption and reduces stress on parts during printing. All of these developments are available on printers sold from the end of 2014. By installing this new version of the printer in its production centre, the company offers its customers the possibility of coming to see

production demonstrations, or even of testing the production of parts before investing. The 1750 °C debinding and sintering furnaces allow production surpluses to be absorbed and a wider range of sintering temperatures to be used to explore new ceramics-based formulations still not widely utilized in 3D printing. The company is continuing its R&D work to meet new

needs (formulations in different phases, new materials, etc.) and to offer new colours to its customers. The recently developed “deep Black” has already been well received.

3DCeram’s investments allow its customers, ceramics users, to explore new options, placing ceramics back at the heart of their developments.



KNOWLEDGE



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