



Joint News Release

System solutions for 3D-Printing

- BASF, LSS, and Farsoon join forces in developing solutions for 3D-parts printed by selective laser sintering
- New material featuring high strength and heat stability

Ludwigshafen and Frankfurt, Germany – BASF, the world's leading chemical company, Farsoon Hi-tech, a manufacturer of selective laser sintering and melting, and Laser-Sinter-Service (LSS), a supplier of support and field service for additive manufacturing (AM) equipment are cooperating to develop integral solutions for materials, printers, technology and service for 3D printing that can be tailored to meet individual customer needs. The partners are highlighting their collaboration on laser sintering equipment, materials, technology and services at LSS's booth E81, hall 3.1, at formnext trade fair in Frankfurt, Germany, November, 17-20, 2015.

The production of individually shaped plastic parts by additive manufacturing using a 3D printing method is gaining increasing prominence in industry. Laser sintering is one method used in the field of additive manufacturing. Following a three-dimensional blueprint, a laser draws the shape of an object in a powder, e.g. polyamide. The material powder hit by the laser beam melts and forms the desired 3D object layer by layer.

Many complex plastic parts are to date produced by an injection molding process. However, 3D techniques offer decisive advantages: they generate lower costs in small series production and are more time-efficient because no casting mold is needed. Consequently, parts manufacturers are able to address customer wishes much faster and more individually.

The materials currently offered on the market do not, however, satisfy the high requirements for industrial applications for functional components as regards stability in long-term use or mechanical and chemical stress. This applies especially for shape and weight optimized components in the aeronautical, automotive and consumers goods sectors.

"We offer an open platform where customers are free to use materials of any manufacturer," explains Guido Elbrecht, Managing Director at LSS. "Furthermore our collaboration with BASF and Farsoon is open for potential customers to jointly develop solutions for functional applications where materials, equipment and processing are aligned." LSS supports its customers with consulting, engineering and services for additive manufacturing solutions. With its expertise LSS ensures the successful implementation and production of customer applications using BASF's new PA6 materials on Farsoon's 3D printers.

In this cooperation, BASF has developed a polyamide-6 powder for laser sintering processes which can be jointly adapted with partners and customers for specific applications. Objects made of this innovative material are distinguished by higher strength and heat stability than objects made of the previously used polyamide-12. "We want to offer our customers materials more suitable for series production, for example of functional components. This is achieved by their processing properties and in combination with the machine of Farsoon," explains Dr. Dirk Simon, Business Director Innovation Business Unit 3D-Printing. "Our material is also distinguished by good recyclability."

"Farsoon has worked closely with BASF and LSS to develop a system that can offer new process and material solutions to the customer," states Dr. Xu Xiaoshu, Chairman of Farsoon. "Our experience in developing laser sintering systems as well as material processing combined with BASF's experience in material development has allowed for the creation of a highly robust machine suitable for a wide range of applications and materials."

About BASF

At BASF, we create chemistry – and have been doing so for 150 years. Our portfolio ranges from chemicals, plastics, performance products and crop protection products to oil and gas. As the world's leading chemical company, we combine economic success with environmental protection and social responsibility. Through science and innovation, we enable our customers in nearly every industry to meet the current and future needs of society. Our products and solutions contribute to conserving resources, ensuring nutrition and improving quality of life. We have summed up this contribution in our corporate purpose: We create chemistry for a sustainable future. BASF had sales of over €74 billion in 2014 and around 113,000 employees as of the end of the year. BASF shares are traded on the stock exchanges in Frankfurt (BAS), London (BFA) and Zurich (AN). Further information on BASF is available on the Internet at www.basf.com.

About Laser-Sinter-Service GmbH (LSS)

LSS has been operating for more than a decade as an independent, pan-European support and service provider in the field of Selective Laser Sintering and Stereolithography. Besides our support activities LSS delivers state of the art upgrades as well as customized solutions; distributes Selective Laser Sintering & Stereolithography materials and provides application support for any material. Furthermore we are supporting with our partners Farsoon and Prodways an open platform strategy for industrial 3D printers in the fields of SLS and MOVINGLight® technology. A strong network of material suppliers enables LSS to deliver or develop solutions which meet or exceed customer application requirements. Our success is based on a highly motivated and flexibly acting team combined with solid technical experience in additive prototyping and manufacturing equipment. Further information is available on the internet at www.lss-europe.com.

About Hunan Farsoon High-tech Co.,Ltd

Hunan Farsoon High-tech Co.,Ltd is a total solution supplier of Selective Laser Sintering and Melting that was founded in 2009 by Dr. Xu Xiaoshu. Dr. Xu is regarded as one of the leading experts in laser sintering technology and has more than 15 years' experience developing the technology in the US and abroad. He was the manager of advanced processing at DTM, one of the pioneers of laser sintering technology, where he was responsible for critical control systems that are used in many selective laser sintering machines today. Farsoon specializes in innovation and invests heavily in the R&D and manufacture of Selective Laser Sintering equipment and materials, rapid prototyping processing services, and SLS technical service support. In 2010 Farsoon successfully developed China's first high-end Selective Laser Sintering machine. At the same time, Farsoon has developed its own line of nylon materials becoming the world's sole manufacturer of both Selective Laser Sintering equipment and materials. Further information is available on the Internet at www.farsoon.net.

Media contacts:

BASF New Business GmbH

Vanessa Holzhäuser
Communications
Phone: +49 1520 9375862
vanessa.holzhaeuser@basf.com

LSS

Detlef Fimpler
Communications
Phone: +49 2301 91323 0
office@lss-europe.com

Farsoon

Don Xu
Communications
Phone: +86 731 8399 8101
xuduo@farsoon.com