
Press release

State supports Center for Additive Manufacturing with 1.2 million Euros

Minister of Economics Olaf Lies: “Lower Saxony wants to become a pioneer in this field”

Hannover, 20. Oktober 2017. In the future, replacement parts, sports shoes or even hearing aids will be produced by 3D printers – individually manufactured at the price of mass products. The so-called additive manufacturing will radically change production. Companies in Lower Saxony are supposed to become the pioneers – supported by Niedersachsen ADDITIV – Zentrum für Additive Fertigung, that was officially opened in Hannover today by the Minister of Economics, Labour and Transport Olaf Lies. From the state government of Lower Saxony, the center will receive 1.2 million Euros for research and technology transfer for a duration of three years.

During the opening event, Lower Saxony’s Minister of Economics, Labor and Transport Olaf Lies said: “Additive processes, such as 3D printing belong to the most important future topics of production technology concerning Industry 4.0. We want to strengthen the SMEs in Lower Saxony, and make sure our companies proceed on the way to additive manufacturing. To stand one’s ground in the competition, companies must be able to manufacture components made of plastics or metals not only by machining but also using the so-called printing. This is becoming increasingly relevant for larger batch sizes. With the center it will be possible to determine the right point in time and technology. This why the State is happily supporting the new center in Hannover.”

Niedersachsen ADDITIV – Das Zentrum für Additive Fertigung intends to make 3D printing ready for series production. Four partners have jointly initiated the center: the Laser Zentrum Hannover e. V. (LZH), the Institut für Integrierte Produktion Hannover gGmbH (IPH), the Deutsche Messe Technology Academy GmbH as well as the LZH Laser Akademie GmbH.

Flexible manufacturing of individual products

Additive manufacturing will fundamentally change production technology. In the future, customized products can be manufactured at the price of mass goods – for example sports shoes that are custom-made for the wearer’s foot, or earphones and hearing aids that perfectly fit the ear.

When customized products are no longer luxury goods, consumer behavior changes, too: Then, mass products will no longer be accepted. Companies who do not keep up with this development could miss the boat. Therefore, Niedersachsen ADDITIV wants to help small and medium-sized enterprises (SME) integrate the new technologies in their production processes.

Information events, workshops, seminars and trainings

A series of information events are being planned, where experts provide knowledge about the fundamentals of additive manufacturing processes. They explain, for example, the technologies available on the market, suitable materials – such as plastics, metals or ceramics – and how 3D printers perform, as compared to conventional manufacturing processes in terms of manufacturing costs, throughput and product quality.

In a learning factory, specialists and executives can try out the systems themselves. In workshops, they can become acquainted with different processes and compare them. During the demonstration events, the experts will show how additive manufacturing works – from the design phase to the finished product.

Moreover, the center will focus on further vocational education: In basic seminars and subsequent training courses, specialists can acquire the necessary knowledge to handle the specific systems at their workplace. Companies who aim to integrate additive manufacturing technologies in their own production, receive free-of-charge support.

Clear requirements, targeted research

How components made of different materials can be additively manufactured, and how 3D printers can be combined with classical manufacturing processes, is being investigated by the scientists at the LZH and IPH, within the scope of Niedersachsen ADDITIV.

“We want to make 3D printing ready for series production. This means we have to solve exactly those problems that companies are facing today”, says Dr. Malte Stonis, CEO of the IPH. Much is already possible using existing technologies, but the 3D printers available today are limited to a small number of materials, and they can only manufacture relatively small products. “This is what we want to change”, adds LZH Executive Director Dr. Dietmar Kracht. “Commercially available materials, for example stainless steel and aluminum alloys, polyamides and special materials such as magnesium play an important role in the manufacturing industry. Now it is our task to develop customized additive manufacturing processes.”

Economic efficiency of additive processes

However, technical feasibility alone is not enough. Technology transfer to industry can only be successful when economic advantages are convincing, too. Therefore, the IPH and LZH, together with the SMEs, will also take a close look at the economic efficiency of the additive processes– from material consumption, to investment costs for the systems, to process speed.

In that way, the center will develop the additive processes of the next generation for widespread use in industry – and make Lower Saxony’s SMEs the pioneers of additive manufacturing.

Events and further information

The first events have already been scheduled:

- “Additive Manufacturing: Chances for SMEs”, January 25th, 2018
- “The potential of additive manufacturing of plastic materials”, March 14th, 2018
- “The potential of additive manufacturing of metals”, May 23rd, 2018

All events are held in German. Events in English are available upon request.

Interested companies will find all information about Niedersachsen ADDITIV as well as information on registration for the first events at www.niedersachsen-additiv.de.

Photo material



Almost any structure can be created using additive manufacturing methods – whether from plastics, metals or ceramics. (Photo: LZH)



Individual products with complex geometries: With Selective Laser Melting (SLM), prototypes and small series can be manufactured quickly and cost-effectively – such as this basket made of a magnesium alloy. (Photo: LZH)

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Laser Zentrum Hannover e.V. (LZH)

As an independent, non-profit research institute, the Laser Zentrum Hannover e.V. (LZH) stands for innovative research, development and consulting. The LZH is supported by the Lower Saxony Ministry for Economics, Labour and Transport and is dedicated to the selfless promotion of applied research in the field of photonics and laser technology. Founded in 1986, over 170 employees are now working for the LZH.

The focus of the LZH lies on the fields of optical components and systems, optical production technologies, and biomedical photonics. Interdisciplinary cooperation between natural scientists and mechanical engineers makes innovative approaches to challenges from the most different areas possible: from the development of components for specific laser systems to process developments for the most diverse laser applications, for example for medical technology or lightweight construction in the automotive sector. Seventeen spin off companies have emerged from the LZH up to now. Thus, the LZH has created a strong transfer between fundamental science, application oriented research, and industry.

Institut für Integrierte Produktion Hannover (IPH) gGmbH

The Institut für Integrierte Produktion Hannover (IPH) gemeinnützige GmbH (which literally translates into Hannover institute of integrated production) is a service provider for production technology and was established in 1988 at the Leibniz University in Hannover. The IPH offers research and development, consultation and qualification concerning the subjects of process technology, production automation, logistics and XXL products. Its customers include companies from the sectors of tool and mould construction, machine and plant construction, aerospace and the automotive industry, electro industry and forging industry.

The business has its headquarters in the science park Marienwerder in the northwest of Hannover and currently employs 64 people, of which 28 are scientific personnel. (Status: August 2017).

Deutsche Messe Technology Academy GmbH

The Deutsche Messe Technology Academy GmbH (short: DMTAC) is a joint initiative of the Deutsche Messe AG and the Volkswagen AG, and is a hundred-percent subsidiary of the Deutsche Messe AG, located in Pavillon 36 on the Hannover Fairgrounds. The main task of the company is to display future megatrends in technology and other fields all the year, complemented by an event portfolio. It is an information and networking platform that offers knowledge transfer in various fields.

The ROBOTATION ACADEMY (Robotics and Automation), the METROPOLITAN ACADEMY (Smart Cities) and the ADDITIVE MANUFACTURING ACADEMY (3D printing) are both under the roof of the Deutsche Messe Technology Academy GmbH. In 2018, their portfolio will be complemented by a VR/AR Academy (VR/AR in industrial application).

LZH Laser Akademie GmbH

As a professional service provider for further education, the LZH Laser Akademie GmbH offers a broad event spectrum for vocational qualification in optical technologies. Their focus is on the fundamentals and application fields of laser technology and related areas. The event program is complemented by symposia and workshops on current topics as well as customer-specific events.

The LZH Laser Akademie is actively involved in developing the further education infrastructure in optical technologies in Lower Saxony. In addition, the company contributes their experience in national and international research projects, for example for the development of curricula, or the evaluation of vocational trainings.

Since their founding in 2003, the LZH Laser Akademie carries out the educational activities of the Laser Zentrum Hannover e.V.