

PRESS RELEASE

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IAMA 2016: Concept Laser wins the race

16 innovations from all over the world demonstrate the high relevance of 3D printing

Düsseldorf, Frankfurt am Main, 24 February 2016. – To thunderous applause, the winner of the International Additive Manufacturing Award (IAMA) was chosen today during the “Inside 3D Printing” specialist congress at the METAV 2016 in Düsseldorf. Concept Laser from Lichtenfels in Upper Franconia came out on top against 15 other entries from Germany, Finland, the UK, the Netherlands, Switzerland, and the USA. “The IAMA is welcome recognition for our hard work, but also evidence that we’re on the right track. So the international 3D award makes us extremely proud, and provides ample motivation to continue enthusing the global market with new innovations,” says a gratified Frank Herzog, Managing Partner and founder of Concept Laser.

Winner’s innovation monitors quality during actual production

3D printing has huge potential: almost daily, new processes and products appear on the market. Whether it’s an artificial hip joint or a turbine blade – almost everything can be additively manufactured. In all of this, however, the quality and sturdiness of the components concerned play an important role. Defects may have dramatic consequences. So manufacturers have to conduct regular quality testing. Destructive test procedures, however, are uneconomical, susceptible to error and prolong the process’s running. New approaches are required, and companies like Concept Laser offer them: the winner of the IAMA has created a process that combines efficiency and brilliance in a single concept.

The innovation involves the first *in-situ* real-time process monitoring system in powder-bed-based additive manufacturing. It measures properties like size and intensity of the melting bath's thermal radiation in ultra-high resolution, and displays the data in correlation to the position of the melting bath on the workpiece's surface and thus to the component's geometry. This will make it easy for the user to localise and evaluate process anomalies during production. "This enables downstream test processes to be reduced to a minimum, which helps to save both time and money," emphasises Frank Herzog. In addition, the process offers an entirely new approach for research and development centres tasked not only with improving the process as such, but also with approving new materials and component geometries.

Additive manufacturing is well on course worldwide

"Innovations like that from Concept Laser show that the sector is doing intensive work on further industrial-scale implementation, focusing on all of the currently challenging issues. This will progress the bandwidth of applications," says Dr. Wilfried Schäfer, Executive Director of the VDW (German Machine Tool Builders' Association) and one of the IAMA's initiators.

Jury of experts rates the innovations' costs, benefits and practical feasibility

The entries submitted for the IAMA were assessed by a ten-strong international jury. This included qualified experts from the industrial sector, the research and academic communities, the media and industrial associations. The entries were rated in categories like the following: degree of technological innovation, clearly discernible advantages for the industrial sector, the natural environment and society as a whole, cost-efficiency, and industrial-scale feasibility.

Woods: impressive innovations from the USA and Europe

"It's exciting to see how much the IAMA has grown after just the second award, with 16 different innovations from six countries competing for the prize," said Douglas K. Woods, President of AMT, the award's co-initiator along with VDW. "We think this speaks highly to how much additive manufacturing is growing worldwide. Additionally, the award has gained an admirable reputation throughout

the industry and we look forward to seeing even more advanced technologies next year, when the award ceremony takes place in the USA.”

The IAMA aims to publicise and promote additive manufacturing on the international scene

The IAMA was created by a partnership between the American AMT (Association For Manufacturing Technology) and the VDW (German Machine Tool Builders' Association). The aim is to proactively support this dynamically growing technology on the international scene and foster the expansion of its industrial applications. The IAMA has been launched specifically for this purpose, as an annual accolade conferred alternatively in Germany and in the USA to honour innovations in the field of 3D printing. The prize is supported by medial partners like Gardner Business Media and VDI nachrichten, plus Cecimo, the European Association of Machine Tool Industries. It was in February 2015 that the IAMA had its first winner: the American company Hybrid Manufacturing Technologies Ltd. Besides the IAMA trophy itself, the winner receives a money prize amounting to 20,000 US-dollars, plus a media package worth 80,000 US-dollars for marketing its prize-winning technology.

Further information under: www.additive-award.com.

Background

Concept Laser GmbH, Lichtenfels

Founded by Frank Herzog in 2000, Concept Laser GmbH claims to rank among the world's leading vendors of machines and lines for 3D printing of metal components. The patented laser curing process (powder-bed-based laser melting of metals) – opens up new freedoms in designing components, and also enables manufacturers to run tool-less, cost-efficient production of highly complex components in small batch sizes. The company's customers come from many different sectors, like medical and dental technology, the aerospace industry, tool and mould construction, the automotive industry, and the watchmaking and jewellery industries. The 3D metal printers from Concept Laser, for example, handle powdered materials made from stainless steel and hot-work steels, aluminium and titanium alloys, plus (for producing jewellery) precious metals.

Further information under: www.concept-laser.de.

The German Machine Tool Builders' Association (VDW), headquartered in Frankfurt am Main, has been representing the interests of the German machine tool industry for 125 years. Together with the German Engineering Federation's Machine Tools and Production Systems Association, it numbers about 300 voluntary member companies, which represent approximately 90 per cent of the sector's entire turnover. The VDW does much more than simply represent the industry's interests to the public, the government, the academic community and business associates. Based on its in-depth knowledge of the industry and resulting expertise, it serves primarily as a service provider to its members. It provides information, advice and support on individual issues in numerous fields. The VDW also organizes exhibitions for the international machine tool industry. It has over 90 years of experience in organizing events. It stages the EMO Hannover on behalf of Cecimo, the European Association of Machine Tool Industries, and it also organizes its own event, the METAV International Exhibition for Metalworking Technologies, in Düsseldorf.

Further information under: www.VDW.de.

AMT – the Association for Manufacturing Technology, represents and promotes US.-based manufacturing technology and its members — those who design, build, sell, and service the continuously evolving technology that lies at the heart of manufacturing. Founded in 1902 and based in Virginia, the association specializes in providing targeted business assistance, extensive global support, business intelligence systems and analysis. AMT is the voice that communicates the importance of policies and programs that encourage research and innovation, and the development of educational initiatives to create tomorrow's Smartforce. AMT owns and manages IMTS - The International Manufacturing Technology Show, which is the premier manufacturing technology event in North America.

Further information under: www.AMTonline.org.

METAV 2016 in Düsseldorf

The METAV 2016 – the 19th International Exhibition for Metalworking Technologies – will be held in Düsseldorf from 23 to 27 February. It will be showcasing the entire spectrum of production technology. The principal focuses are machine tools, production systems, high-precision tools, automated material flows, computer technology, industrial electronics, and accessories, complemented by the new themes of Moulding, Medical, Additive Manufacturing and Quality, which are now permanently anchored in what are called “areas” with their own nomenclature in the METAV's exhibition programme. The METAV's target group for visitors includes all branches of industry that work metal, particularly machinery and plant manufacturers, the automotive industry and its component suppliers, aerospace, the electrical engineering industry, energy and medical technologies, tool and mould-making, plus metalworking and the craft sector.

Further information under: www.metav.de.

The Inside 3D Printing 2016 conference

The Inside 3D Printing conference is being held on 24 and 25 February 2016 at the Exhibition Centre in Düsseldorf, together with the METAV. It offers a complete conference agenda on the subject of additive manufacturing featuring metals and plastic components. The principle focus is on the following sectors: aviation, automaking, the tool industry and medical technology. Through its alliance with the METAV, the organiser Meckler Media aims to create synergies for the participants and significantly increase visitor numbers for the accompanying exhibition. To quote Dr.-Ing. Eric Klemp, who's responsible for the programme of the Inside 3D Printing conference: "Visitors to Inside 3D Printing want to explore the limits of the 3D printing methods currently available – in terms of both technology and commercial viability."

Further information under: <http://inside3dprinting.de/de>.

You will find texts and pictures about the METAV 2016 on the internet under www.metav.de in the Press Service. You can also visit the METAV through our social media channels



<http://twitter.com/METAVonline>



<http://facebook.com/METAV.fanpage>



<http://www.youtube.com/metaltradefair>



<https://de.industryarena.com/metav>

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Pictures:

The IAMA winner for 2016 comes from Germany: the innovation from Concept Laser is the first *in-situ* real-time process monitoring system in the field of powder-based additive manufacturing.

Frank Herzog, Managing Partner and founder of Concept Laser, Lichtenfels

Dr. Wilfried Schäfer, Executive Director of the VDW (German Machine Tool Builders' Association), Frankfurt am Main

The pictures can be requested in high resolution from Iris Reinhart (i.reinhart@vdw.de).