



Additive Industries
Industrialising 3D printing for functional parts

Press release

Additive World

Finalists Design Challenge 2017 show increasing maturity industrial 3D printing

Professionals and students redesign products with broad range of benefits

On Monday February 13, 2017 Additive Industries announced the finalists of Additive World Design for Additive Manufacturing Challenge 2017 in two categories: professional or student designer. From a group of 76 contestants, almost double in comparison with last edition, 6 finalists were selected. 'This year we have seen that submissions showed more than just topology optimization or light weight design. The designers took a broader view on design for additive manufacturing and tailored their designs to eliminate manufacturing difficulties, reduce the number of parts, minimize assembly or lower logistics costs, often combined. This clearly underlines the trend that industrial additive manufacturing is maturing', says Daan Kersten, co-founder and CEO of Additive Industries. The redesigns were submitted from all over the world (a.o. USA, the Netherlands, Germany, UK, Spain, India, Russia and Italy). The selected designs are from the different fields, such as advanced food processing, aeronautics industry, automotive industry and high-tech. On Wednesday evening March 15, during Additive World Awards Dinner in Eindhoven, The Netherlands, Erik de Bruijn (chairman of the jury) will announce the winners of the Design for Additive Manufacturing Challenge 2017.

The professionals from Chocolate Shock Prevention Team from Lareka Confectionery (the Netherlands) show how to benefit from the additive manufacturing capabilities by making a better, lighter, more rigid product with lower number of pieces and more functionality against a better price for the whole. The German team lead Dr. Christoph Kiener (Siemens) optimised design of the Counter Flow Heat Exchanger to maximize heat exchange and created a monolithic design to allow printability in other products that would need heat exchange. The third finalist of the Professional category is another Dutch designer, Michael van der Bent, with his Custom Micro Quadcopter Frame. He decided to select and redesign the frame of the quadcopter to show the strength of the optimised topology combined with the freedom of 3D printing integrating the carrying and protection function of the frame.

The finalists from the student category came this year with interesting (re)designs as well. The team Alliance from the Alliance University (Department of Aerospace Engineering, India) integrated three

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key benefits of AM in test model manufacturing for a Supersonic Wind Tunnel: no tooling is required, costs effective for complex geometries, fast turnaround from design to part. The student from the Russian Federation, Boris Sokolov, optimised the design of an industrial robot arm with topology optimisation. The last, but definitely not the least student designer, is the winner of the last years' Design Challenge, Cassidy Silbernagel from the University of Nottingham (UK). With his redesigned additive manufactured carburettor for an internal combustion engine, Cassidy wanted to show an assembly of moving parts without normal assembly. It is extremely lightweight from the thin walls and self-supporting lattices.

<End of press release>

Please find enclosed the redesigns of the finalists. Please add: source: Additive Industries.

The designs are (from left to right, first top row then bottom):

- 'Sealer-arm' from the Team Chocolate Shock Prevention (Lareka, the Netherlands, professional category)
- 'Monolithic Heat Exchanger' from Dr. Christoph Kiener (Siemens, Germany, professional category)
- 'Custom Micro Quadcopter Frame' from Michael van der Bent (the Netherlands, professional category)
- 'Demonstrator Model for a Supersonic Wind Tunnel' from Team Alliance (Alliance University, India, student category)
- 'Light weight components for Manufacturing Robot' from Boris Sokolov (Peter the Great St.Petersburg Polytechnic University, Russia, student category)
- 'Carburettor for an Internal Combustion Engine' from Cassidy Silbernagel (The University of Nottingham, UK, student category)

[More information](#)

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About Design for Additive Manufacturing Challenge

In order to grow the number of examples and inspire many other industries to develop dedicated applications for industrial 3D printing, Additive Industries has launched the third Additive World Design for Additive Manufacturing Challenge at the renowned Dutch Design Week in Eindhoven in October 2016. Competing in two categories, both professionals and students were encouraged to redesign an existing conventional part of a machine or product for 3D printing. The winners will be announced at the Additive World Conference Award Dinner on March 15th, 2017 in Eindhoven.

Partners in the Design for Additive Manufacturing Challenge are: leading CAE technology provider (e.g. Topology Optimization) - Altair Engineering, a consumer 3D printer manufacturer – Ultimaker, Autodesk - a leader in 3D design, engineering and entertainment software and European Association of the Machine Tool Industries CECIMO. All 6 finalists (3 per each category) will be invited to Additive World Conference and will be able participate on the Additive World Awards Dinner free of charge. The top 3 in both categories get a free 1 year licence of Altair's Inspire software and Netfabb licences. The winners in both categories take home the Ultimaker 3D printer (professional winner Ultimaker 3 and student winner Ultimaker 2+) and a goodie bag from Autodesk. The award winning designs will be printed in metal. The winners of the Additive World Design for Additive Manufacturing Challenge will be invited to present during annual Masterclass: Design for Additive Manufacturing, which will be hosted by Additive Industries during Dutch Design Week. The Dutch Design Week is being organised in October each year in Eindhoven, the Netherlands.

About Additive Industries

Additive Industries is dedicated to bringing metal additive manufacturing for functional parts from lab to fab by offering a modular 3D printing system, MetalFAB1, and seamlessly integrated information platform, Additive World Platform, to high-end and demanding industrial markets. With substantially improved reproducibility, productivity, and flexibility, Additive Industries redefines the business case for series production of additive manufacturing applications in aerospace, automotive, medical technology and high-tech equipment.