

GKN Driveline Florence Replaces Traditional Production Processes across Factory-Floor with 3D Printing to Improve Business Performance

Using customized 3D printed tools, plant reports 70% reduction in production time of certain tools, eliminating costly downtime of the production line and ensuring business continuity

Ability to 3D print one-off replacement parts for machinery across the production floor, ondemand, sees team reduce dependency on suppliers and accelerate part delivery to customers

MINNEAPOLIS & REHOVOT, Israel--(BUSINESS WIRE)-- <u>Stratasys Ltd</u>. (Nasdaq:SSYS), a global leader in applied additive technology solutions, today announced that <u>GKN Driveline</u> <u>Florence</u>, a plant of leading global engineering company, <u>GKN</u>, is expanding the deployment of Stratasys 3D printing across the manufacturing floor to replace several traditional production processes, resulting in improved business performance.

This press release features multimedia. View the full release here: http://www.businesswire.com/news/home/20171025005071/en/



Using customized Stratasys 3D printed tools, GKN Driveline Florence has reduced tool production time from almost a week to under one day, enabling them to provide final parts to customers faster than ever. (Photo: Business Wire)

The division has reported a reduction of almost 70% in lead times when 3D printing customized assembly tools in place of traditional plastic and several low-loaded metal tools – eliminating expensive downtimes of the production line and ensuring business continuity. The team is also 3D printing replacement parts for manufacturing equipment, ondemand, reducing the

dependency on suppliers and accelerating part delivery to customers.

Fueling Innovation

GKN Driveline services over 90% of the world's car manufacturers with its automotive driveline systems and solutions. As well as its work for the Fiat Chrysler Automobiles Group, this also includes luxury vehicles from the likes of Maserati and Ferrari. As customer lead times continue to shorten, the division has identified several new factory-floor applications where 3D printing can replace traditional manufacturing processes to increase productivity.

According to Carlo Cavallini, GKN Lead Process Engineer and Team Leader at the Florence plant, since the introduction of a <u>Stratasys Fortus 450mc Production 3D Printer</u>, his team can now produce complex assembly tools for the production line in a fraction of the time compared to traditional methods. This allows the plant to quickly undergo feasibility analysis of the tools and deploy them on the factory floor significantly faster, accelerating the entire production schedule.

This is exemplified by a recent project that saw the team redesign a greasing nozzle tool to eradicate oil spillages. Cavallini explains: "Utilizing our 3D printer, we developed a tool that dramatically improves grease distribution and eradicates the need to clean up time-consuming spillages. This has been crucial to streamlining the production cycle of the half shaft, enabling us to provide customers with premium quality final parts."

Geared for Customization

To further improve efficiencies on the factory floor, the plant is also extending the use of 3D printing to produce customized replacement parts, on-demand. The Florence plant recently 3D printed a missing cable bracket for a robot, saving at least one week versus the time it would have taken to receive the part from the supplier. This makes GKN Driveline Florence significantly more flexible to manufacturing and maintenance requirements across the production floor.

Continuing to innovate the manufacturing process with 3D printing, the team 3D printed a bespoke end-of-arm tool which moves individual components from one stage of the production line to another. Using high-performance ULTEM 9085 3D printing material, the tool is being successfully deployed on the assembly line and can endure prolonged use to match a traditional metal part. As a result, GKN Driveline Florence now 3D prints several customized end-of-arm tools across production, resulting in significant time-savings compared to its previous process.

"The ability to quickly 3D print tools and parts that are customized to a specific production need gives us a new level of flexibility and significantly reduces our supply chain. Considering that we produce several thousand individual parts a week, this ability to manufacture on-demand is crucial to ensuring our production line is always operational and maintains business continuity," explains Cavallini.

"As we continue to design parts specifically for additive manufacturing, we are finding more and more applications that are delivering value. In the future, I believe that FDM 3D printing will become an integral part of our entire tool development cycle and help us further improve business performance," he adds.

Andy Middleton, President, Stratasys EMEA, concludes: "GKN Driveline Florence is a prime

example of how a growing number of future-ready companies are leveraging the capabilities of additive manufacturing to improve different areas of their business. We are committed to helping these customers identify traditional production processes that can be enhanced, or in some cases, replaced with our 3D printing solutions. It's this type of applied innovation across the manufacturing process that has seen GKN Driveline Florence accelerate product development, reduce costs and reinvent its supply chain."

About Stratasys

Stratasys (NASDAQ: SSYS) is a global leader in applied additive technology solutions for industries including Aerospace, Automotive, Healthcare, Consumer Products and Education. For nearly 30 years, a deep and ongoing focus on customers' business requirements has fueled purposeful innovations—1,200 granted and pending additive technology patents to date—that create new value across product lifecycle processes, from design prototypes to manufacturing tools and final production parts. The Stratasys 3D printing ecosystem of solutions and expertise—advanced materials; software with voxel level control; precise, repeatable and reliable FDM and PolyJet 3D printers; application-based expert services; ondemand parts and industry-defining partnerships—works to ensure seamless integration into each customer's evolving workflow. Fulfilling the real-world potential of additive, Stratasys delivers breakthrough industry-specific applications that accelerate business processes, optimize value chains and drive business performance improvements for thousands of future-ready leaders around the world.

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