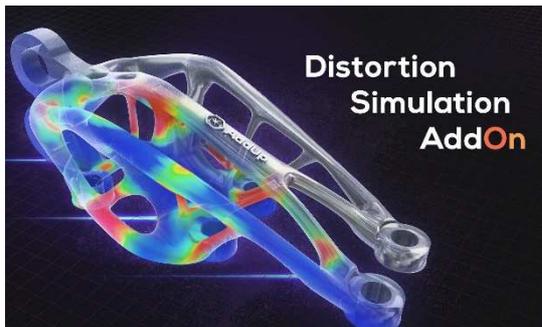


AddUp and ESI Group intensify their collaboration by presenting “***Distortion Simulation AddOn***” at Formnext 2018

Frankfurt, Germany, November 13th 2018. At the Formnext 2018 trade show, AddUp and ESI Group will be presenting “***Distortion Simulation AddOn***”, an ergonomic and accessible simulation module they jointly designed specifically for metal additive manufacturing.



AddUp, a leader in industrial solutions for additive manufacturing, and ESI Group, a leader and pioneer of virtual prototyping solutions based on material physics, have announced the forthcoming availability of ***Distortion Simulation AddOn***. This module will enhance the range of functionalities of the AddUp Manager™ software for the definition and production tracking of parts in additive manufacturing.

Founding members of the SOFIA project (Solution pour la Fabrication Industrielle Additive métallique – Industrial Metal Additive Manufacturing Solution), initiated in 2016 and sponsored by Bpifrance, AddUp and ESI Group have shared a common vision of metal additive manufacturing ever since their first meeting. At a time when the industrialization of additive manufacturing has become reality, simulation based on material physics, which ensures an in-depth understanding of material processes and behavior, is one of the key components to improving the competitiveness of the additive manufacturing process.

Controlling manufacturing processes

The optimization of process parameters is a crucial stage in the additive manufacturing process and a driver of competitive differentiation. Manufacturers, according to their specific applications, must be able to focus available machine times either on production or on process optimization.

Traditionally, production validation has meant primarily producing parts, then assessing their conformity. Introducing a simulation tool, all too often limited expert users, required multiple feedback loops between different functions, creating discontinuity over the digital chain.

By integrating simulation directly in the preparatory stages of additive manufacturing, ***Distortion Simulation AddOn*** brings continuity to the production process. The AddUp Manager user interface, intuitive and stable, offers the ideal working environment for defining simulation parameters, particularly for staff who are not experts in this field.

“With this simulation technology we can help our customers improve their operational efficiencies and responsiveness, by significantly increasing the number of first time right parts” explains **Vincent Ferreiro**, CEO, AddUp. *“Thanks to its accessibility, ***Distortion Simulation AddOn*** will appeal to a wide range of users, requiring only a very short learning curve. This tool will help them maximize the potential of our FormUp machines.”*

Combined expertise has enabled AddUp and ESI Group to generate results that really matter to industry, taking all production parameters into consideration. The process is based on a succession of simple, guided steps. The level of detail is configurable according to customers’ needs: from optimizing industrial production to verifying small series.

Simulation results allow physical characteristics of parts, displacements, strains and residual stresses, to be correlated with the feasibility criteria calculated upstream of production. This



allows risks of production downtimes due to collisions of the roller or scraper to be anticipated. At the end of the process, a modified geometry is generated. Based on predicted deformations due to the process and exportable to STL format, this helps ensure geometrically compliant production.

A partnership geared to industrial competitiveness

“The complementary nature of our teams and our fields of expertise, backed up by our collaboration in the SOFIA project, has enabled us to develop an industrial solution that delivers performance, predictability and competitiveness while continuing to implement innovative production methods such as additive manufacturing,” comments **Vincent Chaillou**, COO, ESI Group.

Distortion Simulation AddOn is the first milestone in the collaboration of these two leaders of the metal industry, who have gained an undisputed mastery of their respective fields. Promoting the competitiveness of the additive manufacturing industry, this first joint project confirms and reinforces the leading roles of AddUp and ESI Group.

Based on complementary expertise, AddUp and ESI Group have thus firmly established their cooperation, sharing know-how and building their respective competitive strengths for the future. AddUp, with its highly open and flexible production systems, is further improving its mastery of industrial processes and the power of its software packages. ESI Group, with its background in material physics, reinforce simulation of machine behavior in metal additive manufacturing of the highest level.

Distortion Simulation AddOn will be available in the spring of 2019.

AddUp – Communication

Jean-Luc Laval

jean-luc.laval@addupsolutions.com

ESI Group – Communication

Florence Barré

communication@esi-group.com

ESI Group – Media Relations

Céline Gallerne

press@esi-group.com

AddUp – Press Inquiries

About AddUp

AddUp was established on April 1st 2016 when two industrial groups, Fives and Michelin, decided to create a major player in metal 3D printing. The aim of this joint venture is to let customers benefit from unique experience and expertise by developing and marketing industrial machines and production workshops based on metal additive manufacturing technology, commonly known as metal 3D printing, on a global scale. AddUp's offering includes technologies for both powder bed fusion (LBM, Laser Beam Melting) and, since acquiring BeAM in June 2018, metal powder deposition by laser (DED, Directed Energy Deposition). The company also provides services, consultancy and training to assist customers in adopting these innovative technologies. Thanks to recent stake acquisition in Poly-Shape, AddUp can now offer its customers unique access to a multi-manufacturer, multi-technology, multi-material and multi-application platform to help them determine the best technological solution for their parts production needs. Headquartered in Clermont-Ferrand, France, with subsidiaries in the United States and Singapore, AddUp currently employs more than 300 members of staff.

About ESI Group

ESI Group is a leading innovator in Virtual Prototyping software and services. Specialist in material physics, **ESI** has developed a unique proficiency in helping industrial manufacturers replace physical prototypes by virtual prototypes, allowing them to virtually manufacture, assemble, test and pre-certify their future products. Coupled with the latest technologies, Virtual Prototyping is now anchored in the wider concept of the Product Performance Lifecycle™, which addresses the operational performance of a product during its entire lifecycle, from launch to disposal. The creation of Hybrid Twin™, leveraging simulation, physics and data analysis, enables manufacturers to deliver smarter and connected products, to predict product performance and to anticipate maintenance needs.

ESI is a French company listed in compartment B of Euronext Paris. Present in more than 40 countries, and addressing every major industrial sector, **ESI Group** employs about 1200 high-level specialists around the world and reported annual sales of €135 million in 2017.



For further information, go to www.esi-group.com.

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