SIEMENS

Media Alert

November 18, 2019

Siemens introduces AM Path Optimizer technology integrated in NX for additive manufacturing

Siemens Digital Industries Software today announced Additive Manufacturing (AM) Path Optimizer, a beta technology integrated in NX™ software, to help customers solve overheating challenges and help reduce scrap and increase production yield to achieve the industrialization of AM, or the use of AM at the industrial scale. Siemens has developed this next generation advanced simulation technology to help maximize the production yield and quality of powder bed fusion manufactured parts. This latest extension of Siemens' end-to-end additive manufacturing solution feeds the digital thread, informing each step of the industrialized additive manufacturing process.

Building on the Simcenter Additive Manufacturing Process Simulation solution announced in November 2018, AM Path Optimizer complements Siemens' strategy for the digital twin of the manufacturing process and addresses errors originated from suboptimal scan strategies and process parameters. These can lead to systematic failures due to overheating, which can cause scrap and inconsistencies in component quality.

Siemens has had success demonstrating this beta technology with TRUMPF as a partner. "With the AM Path Optimizer, Siemens and TRUMPF can push industrialization of additive technologies further forward," said Jeroen Risse, AM Expert at TRUMPF. "In our demonstrations we saw an improvement of geometrical accuracy, elimination of re-coater errors caused by overheating, as well as a more homogenous surface quality. Also, the scrap rate is expected to be reduced significantly."

The technology uses an innovative approach combining physics-based simulation with machine learning to analyze a full job file in few minutes before execution on the machine. This technology is expected to help achieve “first time right” prints and drastically reduce trial and error. It can also help reduce printing costs and enable the printing of components that are nearly impossible to achieve today.

“AM Path Optimizer is the latest innovation in Siemens’ end-to-end additive manufacturing solutions, and one that we feel will have a great impact on the use of additive manufacturing for powder bed fusion manufactured parts,” said Zvi Feuer, Senior Vice President, Manufacturing Engineering Software of Siemens Digital Industries Software. “The combination of NX for AM and our Simcenter AM technology within the Xcelerator portfolio provides our customers with key capabilities to assist manufacturers in designing and printing useful parts at scale, which is unmatched in the market.”

Siemens is actively engaging early adopters to further prove out the AM Path Optimizer solution. For more information about producing quality parts with industrial additive manufacturing software, please visit: www.siemens.com/plm/additivemanufacturing.