



PRESS RELEASE

GENOA 3DP BRINGS A DIFFERENT CLASS OF SIMULATION TECHNOLOGY TO THE ADDITIVE MANUFACTURING ARENA

LONG BEACH, CALIFORNIA (9/7/2017) – AlphaSTAR Corporation’s (ASC) GENOA 3DP, an Additive Manufacturing Simulation tool, was released on August 22, 2017 as part of GENOA v7. The software simulates the 3D printing process to accurately predict deflection, residual stress, damage initiation, and crack growth formation associated with as-built AM parts. More importantly, “the unparalleled tool set allows engineers to improve their printing process by identifying damage & percentage contribution of each type of damage in order to minimize defects”, says Dr. Rashid Miraj, Director of Technical Operations at ASC. Dr. Miraj continues, “Predicting the presence of residual stress, deformation or delamination allows the software to accurately assess when, where & why your product may fail”.

Some of the key benefits of GENOA 3DP Simulation Tool include:

- Simulation of the AM build
- Prediction of Mechanical Properties at Different Temperatures
- Prediction of Delamination and Other Manufacturing Anomalies
- Prediction of the Residual Strength of the Finished As-Built 3D-printed Part Subject to Service Loading.
- Assess Both Material and Process Parameter Sensitivities
- Validated database for composites Thermoplastics, Thermoset and Metal Powder

GENOA 3DP uses advanced multi-scale progressive failure analysis methods to replicate the entire AM process from Material Characterization to Advanced Structural Analysis in order to determine voids, cracks and other manufacturing anomalies. Furthermore, the tool provides end users with the ability to import from G-Code file, generate a structural mesh, run analysis and optimize the AM build.

“The extensive validation & verification study cases performed by AlphaSTAR for its key customers in global regions has enabled us to fine tune our software for real industry use. This close cooperation with our industry partners has allowed GENOA 3DP to meet real life challenges through the entire product life cycle”, explains Kay Matin, ASC President. Managers, engineers and scientists across industry platforms can gain valuable insight as they guide their AM programs to enhance the design, development and manufacturing cycles while saving valuable time & cost.

About AlphaSTAR Corporation: AlphaSTAR Corporation is a leading engineering services and software company that provides innovative physics-based simulation technologies for structural modeling and analysis of advanced composite structures in the aerospace, automotive, defense, and energy industries worldwide. As a solution provider, AlphaSTAR partners with Altair, ANSYS, MSC Software, DS Simulia, and LSTC. AlphaSTAR is headquartered in Long Beach, California and is the recipient of esteemed industry and technology awards for R&D and software development.

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