

Press release
Paris, 5 May 2016

Digital Product Simulation collaborates with European-Canadian research AMOS to explore additive repair for aerospace

Digital Product Simulation joined a research project between Canada and Europe aiming at developing additive manufacturing technology to repair components for the aerospace industry.

DPS is specialized in simulation and Computer Aided Engineering with a strong expertise in modeling & simulation, optimization, CAD/CAE interoperability, process automation and software development for more than 15 years.

DPS joined the AMOS collaboration project to establish valid thermal and thermo-mechanical simulation models and develop a tool to generate an adaptive digital model according to input data coming from manufacturing.

The **AMOS** consortium (Additive manufacturing optimization and simulation platform for repairing and remanufacturing of aerospace components) focuses on a range of high-integrity additive manufacturing techniques combining laser or arc welding tools with automated or robotic control to accurately deposit and melt metal powder or wire.

The project will research fundamental aspects of selected additive processes as well as automated techniques to map damaged areas and calculate repair strategies, and look at how the near-net shape repairs can be effectively machined to a final seamless shape. AMOS will also investigate how additive repair techniques can be factored into the design of new components to optimise efficiency over their life cycle, and the qualification of innovative repair processes which don't comply with current industry specifications.

The European partners of the AMOS consortium are the University of Sheffield AMRC in the UK; Ecole Centrale de Nantes in France; GKN Aerospace Engine Systems, based in Sweden; and DPS in France. Canadian partners are McGill University, Montreal; the University of Ottawa; jet engine manufacturer Pratt & Whitney Canada; landing gear supplier Héroux-Devtek; and automated welding specialist Liburdi.

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