E-XSTREAM ENGINEERING

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e-Xstream engineering, an MSC Software Company, is a leading global software and engineering services company, 100% focused on state-of-the-art modeling of advanced composite materials and structures to help material suppliers and end users across the industries to design and manufacture optimal composite products time and cost efficiently.

Digimat, the Material Modelling Solution developed at e-Xstream, is a Unique, Unified and Integrated Composites Simulation tool, offering complete capabilities to model the nonlinear multi-scale behavior of advanced materials. Recently, Digimat has been enriched by a complete solution that generate composite allowable with progressive failure analysis of Continuous Fiber Reinforced Polymer (CFRP). This solution enables to perform Virtual Test Campaign with the main standard tests used in the Aeronautics.

DIGIMAT fastens the development of optimal composite parts. Trough micromechanical modeling approaches, DIGIMAT accurately predict the nonlinear behavior of complex multi-phase materials.

Digimat Platform can support the development of any composite structures like CFRP, honeycomb sandwich structures, short fiber reinforced thermoplastics, 2D and 3D woven or Discontinuous Fiber Composites (DFC). The coupling of the material description with commercial CAE codes also to perform multi-scale analyses to raise the level of accuracy of composite structures simulations.

Airplane, spacecraft manufacturers and their suppliers use DIGIMAT to study the thermo-mechanical behavior of material lab samples and predict the influence of the material microstructure on the structure end performance. Through partnerships with the aerospace sector, e-Xstream has developed the appropriate tools and extensive know how for modeling materials involved in lightweight aerospace composite structures

References and/or Certifications
Airbus, Boeing, Alenia Aermacchi, Safran Composites, Honeywell Inc, Eaton