

allydriven micro-pumps, each located close to the actuators they control. The micropumps provide 5000 psi of local hydraulic pressure over short runs of small-diameter, lightweight tubing for braking and steering — always available in an emergency. With these predictive capabilities, Messier-Bugatti simulated the behavior of the electrohydraulic system for the A380, validated system power-generating performance, and engineers accurately sized components early in development. This significantly reduced dependency on numerous physical prototypes. Messier-Bugatti can use Imagine. Lab AMESim to tune complex multiphysics systems without performing a large set of tests on bench, commented Michael Benmoussa, senior design engineer on the project. Simulation enabled us to anticipate and reduce the inherent development risks of a new technology by incorporating an upstream validation regarding the technical choices, continued Benmoussa. Simulation results obtained in the early project stages using LMS Imagine.Lab AMESim were later confirmed on test benches with a very good accuracy. In this manner, Ground Loads can significantly reduce guesswork and free the engineering team to focus on innovation and R&D. Messier-Bugatti was able to predict systems and equipment performances — including critical new technologies — on the entire flight