

Profiling System



Below is the Dynamic Laser Speckle Profilometer (DyLASP), a commercial version of a non-destructive testing system originally developed for Langley Research Center under a NASA Small Business Innovation Research contract. It was developed by McMahan Electro-Optics, Winter Park, Florida, a small business enterprise specializing in development of state-of-the-art laser and electro-optical systems for defense and industrial applications.

The DyLASP NAS 1 shown is part of a family of automatic, highly accurate, vibration insensitive systems for two-dimensional

rates advanced laser targeting and imaging technologies developed by McMahan Electro-Optics for Air Force weapon systems.

DyLASP is intended for a variety of applications in the general area of non-destructive testing and evaluation, and the company can customize a system to a user's particular requirements. Among specific applications, DyLASP can determine the quality of bonds and detect debonding in laminated composite materials; it has utility in product design and quality control vibration analysis; in thin weld inspection, stress and strain/finite element verification, fracture mechanisms, hydraulic strain and volume viscoelasticity.

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surface profiling and three-dimensional surface measurements. The DyLASP profilometer locates defects in composite and metallic materials and assemblies. It operates in real time and displays results as a contour map of the assembly under test, with defects indicated by size and location. DyLASP incorpo-

DyLASP was developed by McMahan Electro-Optics Research and Development Division, which is separately located from the headquarters facility in Research Triangle Park, North Carolina. ●