ARAMIS Optical Strain

ARAMIS Optical Strain, using Digital Image Correlation (3D-DIC) and Dynamic 3D Photogrammetry, is a transformational technology providing precision measurements of real, complex materials and structures. ARAMIS Optical Strain is the Industry 4.0 tool for R&D labs, manufacturing and structural test. These full-field optical strain and 3D displacements provide the critical data for accurate measurements and precise validation of computer models. Our goal is to provide our customers with cutting-edge capabilities with high measurement accuracy and highly efficient controls, and with the wraparound training and services to support them.

Designed and manufactured in Germany for over 30 years, is ideal for measuring material behaviors dynamic structure response. It makes tens of thousands of measurement points yet requires a fraction of the set-up time of a single mechanical sensor, i.e. strain gage, extensometer or draw wire displacement sensor. ARAMIS Optical Strain provides a holistic understanding of components under test. Like a FEM (Finite Element Model), each measurement captures the entire measuring volume seen by the cameras, including your areas of concern; and especially the areas that you do not know are a concern, all are measured simultaneously.

Advanced materials designs cause complex issues with load transfer and shear forces, which make full-field optical measurements critical.

ARAMIS 3D-DIC Photogrammetry makes Finite Element Measurements with 10,000 nodes in three axes of deformation, with 6-DOF (degrees of freedom), and the full strain tensor at every point. From materials to complex components to entire aircraft, this is the ideal tool for CAE model validation.