Welding Arc and Plasma Studies Using Real Time, Multipass Holographic Interferometry

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Flow visualization of the plasma process in a welding arc is being studied with a multipass Argon-ion interferometer. High speed movies at 10,000 frames per second are taken. The multipass interferometer and several interferograms of the plasma near the electrode of the welding arc are given in the following photographs. Digitization of the fringes is currently done by hand.