

L-1422

ABSTRACT OF THE DISCLOSURE

A circuit for providing D.C. current from a power source having a current regulating input to a plasma system including an electrode and a nozzle with a plasma arc opening exposing the electrode to a juxtapositioned workpiece, which circuit has a first circuit branch for creating a pilot arc across the electrode and nozzle, a second circuit branch for creating an operative plasma arc across the electrode and the workpiece, a current sensor means in the second circuit branch for sensing the workpiece current in the second circuit branch, switch means for opening the first circuit branch when the sensed workpiece current exceeds a preselected current to transfer the pilot arc to the operative plasma arc, means for regulating the current in the first circuit branch until the arc transfer and means for increasing the pilot current supplied from said power source to first circuit branch when sensed workpiece current exceeds a low threshold value.

