

ABSTRACT OF THE DISCLOSURE

A plasma system including a torch having an electrode and nozzle with a plasma arc opening exposing the electrode to a workpiece and an input transformer with a primary winding network and a secondary winding network driven by the primary winding network, a first circuit driven by the secondary winding network for creating a pilot arc across the electrode and nozzle, a second circuit driven by the secondary winding network for creating a plasma arc across the electrode and the workpiece and a switch for selectively shifting between the first circuit and the second circuit is improved in a manner where the secondary winding network comprising a first winding with a first effective number of turns for driving the first circuit and a second winding with a second effective number of turns for driving the second circuit, and the first and second effective number of turns can be different to operate the torch by different windings during the pilot arc mode and the cutting mode.

