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Study on the Z-Pinch Formation in a Low-Energy Plasma Focus as a Neutron Generation Source

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Abstract

A plasma focus device has been developed as a pulsed neutron generator by using D-T/D-D fusion reactions. During the transfer of energy from the pulsed power system(a capacitor, a spark gap switch and pulse forming line), to the time varying load(a plasma focus device), working gas is broken down and forms a current sheet between the anode and cathode, leading to the formation of Z-pinch. For the first stage, H_2 gas was used and formation of Z-pinch has been studied through the observation of Rogowski coil measurement.