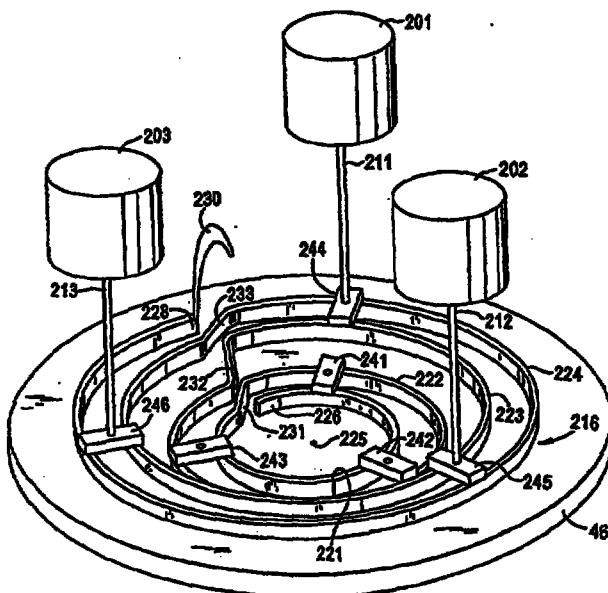




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(54) Title: PLASMA PROCESSOR WITH COIL HAVING VARIABLE RF COUPLING



(57) Abstract

A coil for exciting an r.f. plasma in a vacuum plasma processing chamber includes plural radially and circumferentially extending turns connected between a pair of r.f. excitation terminals. In one embodiment, a drive mechanism varies r.f. field coupling coefficients between different radial and circumferential portions of the coil and the plasma. The drive mechanism includes plural drive shafts which drive different portions of the coil toward and away from the plasma. In a second embodiment, the drive mechanism drives an r.f. shield having at least one moving part for intercepting a portion of an r.f. plasma excitation field derived by the coil.