ABSTRACT

COIL STRUCTURE FOR GENERATING PLASMA AND SEMICONDUCTOR EQUIPMENT

The present disclosure provides a coil structure for generating plasma and semiconductor processing equipment. The coil structure includes at least one coil set. The coil set includes a first sub-coil set and a second sub-coil set that are coaxially arranged. The first sub-coil set includes at least one first planar coil located in a first plane. The second sub-coil set includes at least one second planar coil located in a second plane parallel to the first plane. The first planar coil and the second planar coil are connected in series. An orthogonal projection of the second planar coil on the first plane is mirror-symmetric or mirror-asymmetric to the first planar coil. The coil structure for generating the plasma and the semiconductor processing equipment of the present disclosure compensate for the difference in the current distribution of the coil in the radial direction to improve the distribution uniformpity of the coupling energy generated below the coil in the radial direction to improve the distribution uniformity of the density of the free radicals and ions of the plasma.

FIG. 8