

<ABSTRACT>

MULTIPLY DIVIDED ANODE WALL TYPE PLASMA GENERATION APPARATUS AND PLASMA PROCESSING APPARATUS

An object of the present invention is to provide a multiply divided anode wall type plasma generation apparatus, wherein a short circuit between the cathode and the anode is not caused even if deposited matter adhering and depositing on the inner wall of the anode by diffusion plasma detach and fall. Also, an object is to provide a plasma processing apparatus using the same.

When the plasma (P) generated between the cathode (2) and the anode (3) is ejected forward from the cathode (2) and diffuses, the diffusing material (41) recrystallizes, adheres, and deposits on the inner wall of an electrode cylindrical body, and detaches and falls as a carbon flake (40). The inner wall of the electrode cylindrical body is multiply divided in the shape of a matrix by means of longitudinal and lateral grooves (37, 38). Even if the diffusing plasma adheres and deposits on the anode (3), the size of the deposited matter is reduced by the deposited matter separation effect by a large number of protruding portions (35), and no large or elongated deposited matter is produced. Carbon flakes (40) detach and fall as minute pieces from the protruding portions (39) which are of small size, none of the deposited matter that have detached and fallen extends over and bridges the cathode (2) and the anode (3), and thus a short circuit between both electrodes is prevented.

Figure 3