ABSTRACT

A process gas supply portion 5 of plasma processing apparatus has a plurality of process gas supply holes 55 for introducing process gas into a processing chamber 22. Each of the process gas introducing ports 55 has an axis A diagonally crossing a plane including a surface of a substrate W to be processed to be placed on a susceptor 4 at a specified crossing angle of θ. The axes of each process gas introducing ports 55 simultaneously cross each other at a position. The position is located on a normal line B at the center of the surface to be processed of the substrate W placed on a susceptor 4, and a distance L apart from the surface to be processed toward the plasma chamber 21. This configuration equalizes concentration distribution of the process gas above the substrate W.