

ABSTRACT

METHOD FOR REMOVING CHLORINE TRIFLUORIDE CLEANING RESIDUES IN SiC EPITAXIAL GROWTH FURNACE SYSTEM

A cleaning time in a SiC epitaxial growth furnace system is shorten and SiC film formation is promoted. Provided is a method for removing, after a SiC epitaxial growth furnace system including an epitaxial growth furnace for forming a SiC film and an exhaust pipe of the furnace is cleaned with chlorine trifluoride gas, a chlorine trifluoride cleaning residue adhering and remaining in the exhaust pipe. After completion of the cleaning with the chlorine trifluoride gas, hydrogen chloride gas is introduced into the epitaxial growth furnace together with a raw material gas in a SiC film formation process. Accordingly, a SiC film is formed and concurrently the processed gas used in the SiC film formation process is flown in the exhaust pipe. Since hydrogen molecules, hydrogen radicals, and the like are contained in the processed gas, chlorine trifluoride cleaning residues in the exhaust pipe are removed by them.