APPARATUS AND METHOD FOR POLYMER REMOVAL AFTER METAL ETCHING IN A PLASMA REACTOR

ABSTRACT

A cleaning station is described having facilities for delivering two liquids to a rinse tank for the purpose of dissolving chlorine and metal containing polymers and rinsing away water soluble residues and particulates in one sequential operation. The station is located on a plasma etching tool and is used immediately after a metallization layer on a semiconductor wafer has been anisotropically etched and residual photoresist ashed by the plasma tool. The capability of delivering two liquids permits the dissolution of polymers left after the photoresist ashing with a polymer solvent, followed immediately by the rinsing away of soluble residues and particulates with hot de-ionized water. The novel rinse station consolidates the process of polymer removal with a water rinse thereby conducting the processes with dispatch and with reduced handling. By sequencing the two steps in the same station metal corrosion exposure is reduced and the need for additional liquid polymer stripping equipment is eliminated.

(FIGURE 3 IS SUGGESTED FOR PUBLICATION)