

ABSTRACT

A method and apparatus for reducing the pump down time of a chamber configured for copper deposition are provided. Hydrogen and a carrier gas are introduced into
5 the chamber, a plasma is ignited and the chamber is cleaned with the plasma. Preferably the carrier gas comprises a non-reactive gas such as semiconductor grade argon, helium or nitrogen. The hydrogen preferably is diluted to about
10 5%, and the hydrogen and carrier gas may be provided from a single source by diluting the hydrogen via the carrier gas. To improve cleaning effectiveness, the chamber shield and/or target may be heated during cleaning. If the chamber configured for copper deposition is a high density plasma chamber, the chamber's copper coil also may be heated during
15 cleaning.