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(54) Title: METHOD OF REDUCING METAL CONTAMINATION DURING SEMICONDUCTOR PROCESSING IN A REACTOR HAVING METAL COMPONENTS

(57) Abstract

A method of reducing metal contamination during semiconductor processing includes forming an aluminum oxide layer on certain metal components of a reactor. The aluminum oxide layer is formed by heating the metal component first in a dry nitrogen atmosphere to a first temperature (110), and then in a dry hydrogen atmosphere to a second temperature (120). The component is then soaked at the second temperature in a wet hydrogen atmosphere to form the aluminum oxide layer (130), and is followed by soaking at the second temperature in a dry hydrogen atmosphere to reduce any other metal oxides that may have formed (140). The component is then cooled first in a dry hydrogen atmosphere (150), and then in a dry nitrogen atmosphere (160) where a layer of substantially pure aluminum oxide is provided on the surface of the metal component.

