Claims

The invention claimed is:

1. A method for seasoning a component of an electronic device manufacturing system comprising:

seasoning the component before the component is installed into the electronic device manufacturing system.

2. The method of claim 1 further comprising the step:

after seasoning the component, installing the component into the electronic device manufacturing system.

3. The method of claim 2 further comprising the step:

after installing the component into the electronic device manufacturing system, further seasoning the component.

4. The method of claim 1 further comprising:

prior to installing the component into the electronic device manufacturing system, determining whether the ex situ seasoned component meets a predetermined quality standard.

5. The method of claim 4 wherein the predetermined quality standard comprises the maximum number of in situ seasoning cycles which the ex situ seasoned component would be required to undergo before being placed into service.

6. The method of claim 1 wherein the electronic device manufacturing system is selected from the group consisting of chemical mechanical polishing, chemical deposition, ion implantation, epitaxial crystal growth, plasma, oxidation,

photolithography, diffusion, metallization, and cleaning systems.

7. A method for seasoning an electronic device manufacturing system component having an orifice comprising:

exposing the component to a plasma; and

forcing the plasma through the orifice.

8. The method of claim 7 further comprising the step of mounting the component to a fixture which is adapted to form a seal with the component and reducing a pressure within the fixture whereby the plasma is drawn through the orifice.

9. A system for seasoning a component of an electronic device manufacturing system comprising:

a seasoning chamber;

a gas supply connected to the seasoning chamber;

a fixture adapted to support the component inside of the seasoning chamber;

a vacuum pump connected to the fixture; and

an upper electrode and a lower electrode adapted to create a plasma inside of the seasoning chamber;

wherein the fixture is further adapted to draw the plasma through an orifice of the component.

10. The system of claim 9 wherein the upper electrode comprises a wall of the seasoning chamber.

11. The system of claim 9 wherein the lower electrode comprises the fixture.

12. A method of improving the performance of an electronic device manufacturing facility comprising:

reducing the number of electronic device manufacturing component seasoning steps which are performed using production equipment, whereby the amount of electronic device manufacturing system downtime is reduced.

13. The method of claim 12 wherein the step of reducing the number of electronic device manufacturing component seasoning steps further comprises performing the balance of the reduced number of electronic device manufacturing component seasoning steps outside of the electronic device manufacturing facility.

14. The method of claim 12 further comprising the step of installing a pre-seasoned electronic device manufacturing component into production equipment.

CLAIMS

1. A method for seasoning a component of a process chamber for manufacturing an electronic device, the component having a face-side, a backside, and a surface defining an orifice that extends between the face-side and the backside, the method comprising:

placing the component on a fixture in a seasoning chamber, the fixture being configured so that ends of the orifice are exposed when the component is on the fixture;

exposing the component to a plasma;

forcing the plasma through the orifice by creating a pressure differential across the face-side and the backside of the component;

removing the component from the seasoning chamber after the surface that defines the orifice and the backside of the component have been coated by the plasma; and

subsequently installing the component in the process chamber.

2. The method of claim 1 further comprising: prior to installing the component into the process chamber, determining whether the component meets a predetermined quality standard.

3. The method of claim 1 wherein the component is a new component.

4. The method of claim 1 wherein the component is a reconditioned component.

5. The method of claim 2 wherein the predetermined quality standard comprises the maximum number of in situ seasoning cycles which the ex situ seasoned component would be required

to undergo before being placed into service.

6. The method of claim 1 wherein the process chamber is part of an electronic device manufacturing system selected from the group consisting of chemical mechanical polishing, chemical deposition, ion implantation, epitaxial crystal growth, plasma, oxidation, photolithography, diffusion, metallization, and cleaning systems.

7. The method of claim 1 wherein the step of forcing the plasma through the orifice comprises drawing the plasma through the orifice using a pump.

8. The method of claim 1 further comprising the fixture is adapted to form a seal with the component.

9. The method of claim 8 further comprising the step of reducing a pressure within the fixture whereby the plasma is drawn through the orifice.

10. The method of claim 9 further comprising the step of connecting a vacuum pump to the fixture.