Claims

1. A spray cleaning apparatus (400, 500,600, 700) for components of an electronic device manufacturing process chamber comprising:

a support member (606, 702, 706);

a spray nozzle (408, 608) attached to the support member;

a cleaning chemistry supply (410, 604, 704); and

a conduit (606, 706) adapted to convey cleaning chemistry from the cleaning chemistry supply to the spray nozzle;

wherein the spray nozzle attached to the support member is adapted to rotate and/or to move linearly and is adapted to direct a spray of cleaning chemistry to the interior of an electronic device manufacturing process chamber component from a plurality of directions.

2. The spray cleaning apparatus of claim 1, further comprising a temperature sensor (420) adapted to measure the temperature of the chamber component.

3. The spray cleaning apparatus of claim 2, further comprising a controller (424) which is adapted to compare a temperature of the chamber component to a predetermined temperature range and/or which is further adapted to change the flow rate of cleaning chemistry sprayed by the spray nozzle.

4. The spray cleaning apparatus of claim 3, wherein the controller (424) is adapted to increase the flow of

cleaning chemistry to increase the temperature of the chamber component.

5. The spray cleaning apparatus of claim 3 or 4, wherein the controller (424) is adapted to decrease the flow of cleaning chemistry to decrease the temperature of the chamber component.

6. A spray cleaning apparatus for components (400, 500,600, 700) of an electronic device manufacturing process chamber comprising:

a cleaning tank (402);

a plurality of spray nozzles (408, 608) connected to an arm (606, 702);

a mounting device (406) adapted to hold a process chamber component (404) inside the tank; and

a cleaning chemistry supply (410, 704, 604) connected to the spray nozzles;

wherein the arm is adapted to move the spray nozzles to direct a spray of cleaning chemistry at the chamber component from a plurality of directions.

7. The spray cleaning apparatus of claim 6, further comprising a controller (424) which is adapted to direct the spray of cleaning chemistry from individual spray nozzles to increase the amount of cleaning chemistry which impacts portions of the chamber component which are more heavily coated with a film to be cleaned and/or to decrease the amount of cleaning chemistry which impacts portions of the chamber component which are less heavily coated with film to be cleaned.

CLAIMS

1. A spray cleaning apparatus (400, 500, 600, 700) for components of an electronic device manufacturing process chamber comprising:

a cleaning tank (402) adapted to receive an electronic device manufacturing process chamber component (404);

a turntable (502) received in the cleaning tank (402) and adapted to rotatably support the electronic device manufacturing process chamber component (404);

a support member (606, 702, 706) extending into the cleaning tank (402);

a spray nozzle (408, 608) attached to the support member;

a cleaning chemistry supply (410, 604, 704);

a conduit (606, 706) adapted to convey cleaning chemistry from the cleaning chemistry supply to the spray nozzle; wherein the spray nozzle (408), (608) attached to the support member (606, 702, 706) is adapted to rotate and/or to move linearly and is adapted to direct a spray of cleaning chemistry to the interior of the electronic device manufacturing process chamber component (404) from a plurality of directions;

a temperature sensor (420) adapted to measure the temperature of the electronic device manufacturing process chamber component (404); and

a controller (424) adapted compare a temperature of the electronic device manufacturing process chamber component (404) to a predetermined temperature range and to change the flow rate of the cleaning chemistry sprayed by the spray nozzle (408), (608) to maintain the temperature of the electronic device manufacturing process chamber component (404) within the predetermined range.

2. The spray cleaning apparatus of claim 1, wherein the controller (424) is adapted to increase the flow of cleaning chemistry to increase the temperature of the electronic device manufacturing process chamber component (404).

3. The spray cleaning apparatus of claims 1 or 2, wherein the controller (424) is adapted to decrease the flow of cleaning chemistry to decrease the temperature of the electronic device manufacturing process chamber component (404).