CLAIMS

1. An electroplating apparatus seal cleaning assembly comprising:

an arm pivotable between a first position and a second position, wherein the arm is rotatable about a central axis of the arm; and

a cleaning head including a bracket portion coupled with a distal portion of the arm, the cleaning head comprising a front portion formed to interface with a seal of an electroplating apparatus, wherein the cleaning head defines a trench along the front portion, wherein the cleaning head defines a plurality of fluid channels through the cleaning head, each fluid channel of the plurality of fluid channels fluidly accessing a backside of the trench, wherein the cleaning head further comprises a contact pin at least partially extending through the trench and configured to be in direct contact with the seal.

2. The electroplating apparatus seal cleaning assembly of claim 1, wherein the front portion of the cleaning head is at least partially characterized by an arcuate profile configured to accommodate an annular seal.

3. The electroplating apparatus seal cleaning assembly of claim 1, wherein the cleaning head further comprises a clearance pin at least partially extending through the trench and configured to define a gap between the clearance pin and the seal when the contact pin is in direct contact with the seal.

4. The electroplating apparatus seal cleaning assembly of claim 3, wherein the plurality of fluid channels comprises:

a first channel fluidly accessing a first position along the trench; and

a second channel fluidly accessing a second position along the trench radially offset from the first position in a direction of rotation of the seal.

5. The electroplating apparatus seal cleaning assembly of claim 4, wherein the clearance pin is positioned between the first position and the second position.

6. The electroplating apparatus seal cleaning assembly of claim 1, wherein the cleaning head comprises a hydrophobic material.

7. An electroplating system comprising:

a system head having a rotor, the system head configured to hold a substrate for processing;

a seal positioned on the rotor;

a head lifter coupled with the system head and configured to position the system head; and

a seal cleaning assembly comprising:

an arm pivotable between a first position and a second position where a distal portion of the arm is vertically aligned with an interior region of the system head, wherein the arm is rotatable about a central axis of the arm, and

a cleaning head including a bracket portion coupled with a distal portion of the arm, the cleaning head characterized by a front portion formed to interface with an interior surface of the seal, wherein the cleaning head defines a trench along the front portion, wherein the cleaning head defines a plurality of fluid channels through the cleaning head, each fluid channel of the plurality of fluid channels fluidly accessing a backside of the trench, wherein the cleaning head further comprises a contact pin at least partially extending through the trench and configured to be in direct contact with the seal during a cleaning operation.

8. The electroplating system of claim 7, wherein, when the arm is located in the second position, the distal portion of the arm is configured to rotate the cleaning head from a retracted position into direct contact with the seal.

9. The electroplating system of claim 8, further comprising a torque-controlled motor configured to drive the arm and maintain contact between the cleaning head and the seal while the rotor rotates the seal across the cleaning head.

10. The electroplating system of claim 7, where the seal is characterized by an annular form, and wherein the front portion of the cleaning head is at least partially characterized by an arcuate profile configured to accommodate an inner annular sidewall of the seal.

11. The electroplating system of claim 7, wherein the cleaning head further comprises a clearance pin at least partially extending through the trench and configured to define a gap between the clearance pin and the seal when the contact pin is in direct contact with the seal.

12. The electroplating system of claim 11, wherein the plurality of fluid channels comprises:

a first channel fluidly accessing a first position along the trench; and

a second channel fluidly accessing a second position along the trench radially offset from the first position in a direction of rotation of the seal.

13. The electroplating system of claim 12, wherein the clearance pin is positioned between the first position and the second position.

14. The electroplating system of claim 13, further comprising a fluid delivery tube extending along the arm and configured to provide a fluid to the first channel.

15. The electroplating system of claim 14, further comprising a fluid removal tube extending along the arm and configured to remove the fluid from the second channel.

16. The electroplating system of claim 15, wherein a vacuum is maintained through the fluid removal tube during operation.