

CLAIMS

1. A system for recirculating fluids, the system comprising:
 - a storage drum containing a semiconductor slurry; and
 - an apparatus, including
 - a base portion;
 - an inlet portion coupled to a first end of the base portion, the inlet portion being in fluid communication with the storage drum and configured to receive the semiconductor slurry from the storage drum; and
 - a nozzle coupled to a second end of the base portion and located to recirculate the semiconductor slurry into the storage drum, the nozzle comprising:
 - a nozzle base portion;
 - a nozzle inlet at a first end of the nozzle base portion; and
 - a nozzle portion that extends away from an exterior surface of the nozzle base portion between the first end and a second end of the nozzle base portion,
 - wherein the nozzle portion comprises a helical groove extending from a position near the nozzle base portion to a position near a tip of the nozzle portion.
2. The system of claim 1, wherein the base portion comprises:
 - a first portion;
 - a second portion coupled to the first portion, wherein the first portion is at an angle with respect to the second portion.
3. The system of claim 2, wherein the angle of the first portion with respect to the second portion is between 90 degrees and 160 degrees.
4. The system of claim 2, wherein the base portion further comprises:
 - a connector coupled to the first portion on a first end and the second portion on a second end.
5. The system of claim 4, wherein the base portion is angled at the connector.
6. The system of claim 2, wherein the inlet portion comprises:
 - a first inlet portion;
 - a second inlet portion; and

an inlet connector with a first end and a second end, wherein the first end is received within the first inlet portion and the second end is received within the second inlet portion to couple the first inlet portion to the second inlet portion.

7. The system of claim 6, wherein the first inlet portion is tapered from a first end to a second end.

8. The system of claim 6, wherein the inlet connector has an outer diameter smaller than an outer diameter of the first inlet portion and an outer diameter of the second inlet portion.

9. The system of claim 1, wherein the nozzle portion tapers as it extends away from the second end of the nozzle base portion to a tip.

10. The system of claim 1, wherein the helical groove extends from an exterior surface through the nozzle portion to an interior surface of the nozzle portion.

11. The system of claim 2, further comprising:
a coupler coupled to a second inlet portion on a first end and the first portion of the base portion on a second end.

12. The system of claim 11, wherein the coupler comprises:
a first coupler portion;
a second coupler portion; and
a connector with a first end and a second end, wherein the first end is received within the first coupler portion and the second end is received within the second coupler portion to couple the first coupler portion to the second coupler portion.