~~What is claimed is:~~

CLAIMS

1. A conditioning system for a filter module, comprising:

an inlet fluidly connectable to a source of ultrapure water;

a heat exchanger lined with a first corrosion resistant material positioned downstream from the inlet;

a magnetically levitated pump in fluid communication with the heat exchanger;

an outlet positioned downstream from the magnetically levitated pump and fluidly connectable to the filter module;

a channel lined with a second corrosion resistant material constructed and arranged to bypass the heat exchanger;

a controller configured to selectively direct water to the heat exchanger or to the channel, the controller being programmable to act responsive to at least one of a concentration of total organic carbon (TOC) in the source of ultrapure water and a concentration of TOC in water at the outlet; and

a base supporting the heat exchanger, the magnetically levitated pump, the channel, and the controller~~.~~

~~2. The system of claim 1, further comprising an inlet sensor configured to detect the concentration of TOC in the source of ultrapure water and an outlet sensor configured to detect the concentration of TOC in the ultrapure water at the outlet, wherein at least one of the inlet sensor and the outlet sensor is electrically connected to the controller.~~

~~3. The system of claim 2, wherein at least one of the inlet sensor and the outlet sensor is further configured to detect particle sizes of 10 nm or less.~~

~~4. The system of claim 1, wherein the inlet is fluidly connectable downstream from the filter module.~~

~~5. The system of claim 4, wherein the filter module is an ultrafiltration module.~~

6. The system of claim 1, wherein the first corrosion resistant material is stable at a water temperature of up to 190º F.

7. The system of claim 1, wherein at least one of the first and the second corrosion resistant material is a fluoropolymer.

8. The system of claim 7, wherein at least one of the first and the second corrosion resistant material is ethylene tetrafluoroethylene (ETFE), polyvinylfluoride (PVF), polyvinylidene fluoride (PVDF), perfluoroalkoxy alkane (PFA), fluorinated ethylene propylene (FEP), polytetrafluoroethylene (PTFE), ethylene chlorotrifluoroethylene (ECTFE), polychlorotrifluoroethylene (PCTFE), and combinations thereof.

9. The system of claim 1, wherein any metal component of the system is substantially free of stainless steel.

10. The system of claim 9, wherein at least one of the metal components comprises at least one of titanium, incoloy, hastelloy, and combinations thereof.

11. The system of claim 1, wherein the system is portable.

12. The system of claim 1, wherein the magnetically levitated pump is lined with a corrosion resistant plastic.

13. The system of claim 1, wherein the controller is further programmable to set a speed of the magnetically levitated pump responsive to an indication of capacity of the filter module.

14. A method of conditioning a filter module comprising:

measuring a concentration of total organic carbon (TOC) in a source of ultrapure water;

heating the source of ultrapure water to between about 170º F and about 190º F to produce heated water;

rinsing the filter module with the heated water at a first flow rate of between about 2 and about 15 gpm for a first predetermined period of time sufficient to stabilize a concentration of TOC in water at an outlet of the filter module;

flushing the filter module with the source of ultrapure water having ambient temperature at a second flow rate of between about 2 and about 40 gpm for a second predetermined period of time, the second flow rate being greater than the first flow rate; and

cycling between rinsing the filter module with the heated water and flushing the filter module with the ultrapure water at ambient temperature until the water at the outlet of the filter module has less than 100 counts per liter of particles having a particle size less than 14 nm.

15. The method of claim 14, wherein the filter module is conditioned before use in water treatment.

16. The method of claim 14, wherein the filter module is conditioned when the concentration of TOC in the water at the outlet of the filter module is greater than 2 ppb.

17. The method of claim 14, further comprising selecting the first flow rate responsive to a capacity of the filter module.

18. The method of claim 14, further comprising selecting the temperature of the heated water responsive to a material of the filter module.

19. A method of facilitating conditioning of a filter module comprising:

providing a portable filter module conditioning system comprising

a heat exchanger lined with a first corrosion resistant material;

a magnetically levitated pump in fluid communication with the heat exchanger;

a channel lined with a second corrosion resistant material constructed and arranged to bypass the heat exchanger; and

a controller configured to selectively direct water to the heat exchanger or to the channel, the controller being programmable to act responsive to at least one

of a concentration of total organic carbon (TOC) in water upstream from the heat exchanger and the magnetically levitated pump and a concentration of TOC in water downstream from the magnetically levitated pump; and

providing instructions to fluidly connect the portable filter module conditioning system to a source of ultrapure water through an inlet of the portable filter module conditioning system and fluidly connect the portable filter module conditioning system to a filter module through an outlet of the portable filter module conditioning system.

20. The method of claim 19, further comprising installing an inlet sensor configured to measure the concentration of TOC in the source of ultrapure water and an outlet sensor configured to measure the concentration of TOC in the water downstream from the magnetically levitated pump.

21. The method of claim 20, further comprising electrically connecting the controller to the inlet sensor and the outlet sensor.

22. The method of claim 19, further comprising fluidly connecting the inlet of the portable filter module conditioning system to the source of ultrapure water and fluidly connecting the outlet of the portable filter module conditioning system to the filter module.

23. The method of claim 22, wherein fluidly connecting the inlet of the portable filter module conditioning system to the source of ultrapure water comprises fluidly connecting the portable filter module conditioning system to an outlet of the filter module.

24. The method of claim 22, wherein fluidly connecting the outlet of the portable filter module conditioning system to the filter module comprises fluidly connecting the portable filter module conditioning system to an inlet of an ultrafiltration module.

25. The method of claim 24, wherein fluidly connecting the inlet of the portable filter module conditioning system to the source of ultrapure water comprises fluidly connecting the portable filter module conditioning system to an outlet of the ultrafiltration module.

~~26. The method of claim 1, further comprising providing instructions to flush the portable filter module conditioning system before fluidly connecting the portable filter module conditioning system to the filter module.~~