CLAIMS

We claim:

1. A temperature system for providing a cooling fluid, comprising:

a fluid source;

a cooling device for chilling the cooling fluid supplied by the fluid source to generate a chilled fluid and outputting the chilled cooling fluid; and

a filter receiving the chilled cooling fluid from the cooling device, the filter having a filter mesh sized to capture ice particles in the chilled cooling fluid.

2. The temperature system of claim 1, wherein the filter mesh is sized to capture ice particles having a size greater than or equal to 2μm.

3. The temperature system of claim 1, wherein the filter mesh is sized to capture ice particles having a size less than 10μm.

4. The temperature system of claim 1, wherein the filter mesh is sized to capture ice particles having a size less than 100μm.

5. The temperature system of claim 1, wherein the cooling fluid comprises air.

6. The temperature system of claim 1, wherein the cooling fluid comprises a liquid.

7. The temperature system of claim 1, wherein the filter mesh comprises stainless steel.

8. The temperature system of claim 1, wherein the filter mesh is in a Dutch weave configuration.

9. A temperature control system for providing a temperature-controlled fluid, comprising:

a source of fluid;

a fluid chiller receiving fluid from the source, chilling the fluid to generate the temperature-controlled fluid and outputting the temperature-controlled fluid; and

a filter receiving the temperature-controlled fluid, the filter having a filter mesh sized to capture ice particles in the temperature-controlled fluid.

10. The temperature control system of claim 9, wherein the filter mesh is sized to capture ice particles having a size greater than or equal to 2μm.

11. The temperature control system of claim 9, wherein the filter mesh is sized to capture ice particles having a size less than 10μm.

12. The temperature control system of claim 9, wherein the filter mesh is sized to capture ice particles having a size less than 100μm.

13. The temperature control system of claim 9, wherein the temperature-controlled fluid comprises air.

14. The temperature control system of claim 9, wherein the temperature-controlled fluid comprises a liquid.

15. The temperature control system of claim 9, wherein the filter mesh comprises stainless steel.

16. The temperature control system of claim 9, wherein the filter mesh is in a Dutch weave configuration.

17. The temperature control system of claim 9, further comprising a heater for heating the temperature-controlled fluid.

18. The temperature control system of claim 17, wherein the heater receives the temperature-controlled fluid from the filter.

19. The temperature control system of claim 18, wherein the temperature-controlled fluid is directed onto a device under test (DUT) to control temperature in the DUT.

20. The temperature control system of claim 9, wherein the temperature-controlled fluid is directed onto a device under test (DUT) to control temperature in the DUT.

21. A temperature control system for a chuck, comprising:

a circulating fluid chiller for generating a chilled fluid, comprising:

a pump for circulating fluid through the system and the chuck, and

a heat exchanger chilling the fluid to generate the chilled fluid and outputting the chilled fluid to the chuck; and

a filter between the heat exchanger and the chuck, the filter having a filter mesh sized to capture ice particles in the chilled fluid.

22. The temperature control system of claim 21, wherein the filter mesh is sized to capture ice particles having a size greater than or equal to 2μm.

23. The temperature control system of claim 21, wherein the filter mesh is sized to capture ice particles having a size less than 10μm.

24. The temperature control system of claim 21, wherein the filter mesh is sized to capture ice particles having a size less than 100μm.

25. The temperature control system of claim 21, wherein the chilled fluid comprises air.

26. The temperature control system of claim 21, wherein the chilled fluid comprises a liquid.

27. The temperature control system of claim 21, wherein the filter mesh comprises stainless steel.

28. The temperature control system of claim 21, wherein the filter mesh is in a Dutch weave configuration.

Claims

1. A temperature control system for providing a temperature-controlled fluid, comprising:

a source of fluid;

a fluid chiller receiving fluid from the source, chilling the fluid to generate the temperature-controlled fluid and outputting the temperature-controlled fluid, wherein the temperature-controlled fluid comprises air; and

a filter receiving the temperature-controlled fluid, the filter having a filter mesh sized to capture ice particles in the temperature-controlled fluid.

2. The temperature control system of claim 1, wherein the filter mesh is sized to capture ice particles having a size greater than or equal to 2μm.

3. The temperature control system of claim 1, wherein the filter mesh is sized to capture ice particles having a size less than 10μm.

4. The temperature control system of claim 1, wherein the filter mesh is sized to capture ice particles having a size less than 100μm.

5. The temperature control system of claim 1, wherein the temperature-controlled fluid comprises a liquid.

6. The temperature control system of claim 1, wherein the filter mesh comprises stainless steel.

7. The temperature control system of claim 1, wherein the filter mesh is in a Dutch weave configuration.

8. The temperature control system of claim 1, further comprising a heater for heating the temperature-controlled fluid.

9. The temperature control system of claim 8, wherein the heater receives the temperature-controlled fluid from the filter.

10. The temperature control system of claim 9, wherein the temperature-controlled fluid is directed onto a device under test (DUT) to control temperature in the DUT.

11. The temperature control system of claim 1, wherein the temperature-controlled fluid is directed onto a device under test (DUT) to control temperature in the DUT.

12. A temperature control system for providing a temperature-controlled fluid, comprising:
a source of fluid;
a fluid chiller receiving fluid from the source, chilling the fluid to generate the temperature-controlled fluid and outputting the temperature-controlled fluid; and a filter receiving the temperature-controlled fluid, the filter having a filter mesh sized to capture ice particles in the temperature-controlled fluid, wherein the filter mesh is sized to capture ice particles having a size greater than or equal to 2μm.

13. The temperature control system of claim 12, wherein the temperature-controlled fluid comprises air.

14. The temperature control system of claim 12, wherein the temperature-controlled fluid comprises a liquid.

15. The temperature control system of claim 12, wherein the temperature-controlled fluid is directed onto a device under test (DUT) to control temperature in the DUT.

16. A temperature control system for providing a temperature-controlled fluid, comprising:
a source of fluid;
a fluid chiller receiving fluid from the source, chilling the fluid to generate the temperature-controlled fluid and outputting the temperature-controlled fluid; and a filter receiving the temperature-controlled fluid, the filter having a filter mesh sized to capture ice particles in the temperature-controlled fluid, wherein the filter mesh is sized to capture ice particles having a size less than 10μm.

17. The temperature control system of claim 16, wherein the temperature-controlled fluid comprises air.

18. The temperature control system of claim 16, wherein the temperature-controlled fluid comprises a liquid.

19. The temperature control system of claim 16, wherein the temperature-controlled fluid is directed onto a device under test (DUT) to control temperature in the DUT.

20. A temperature control system for providing a temperature-controlled fluid, comprising:
a source of fluid;
a fluid chiller receiving fluid from the source, chilling the fluid to generate the temperature-controlled fluid and outputting the temperature-controlled fluid; and a filter receiving the temperature-controlled fluid, the filter having a filter mesh sized to capture ice particles in the temperature-controlled fluid, wherein the filter mesh is sized to capture ice particles having a size less than 100μm.

21. The temperature control system of claim 20, wherein the temperature-controlled fluid comprises air.

22. The temperature control system of claim 20, wherein the temperature-controlled fluid comprises a liquid.

23. The temperature control system of claim 20, wherein the temperature-controlled fluid is directed onto a device under test (DUT) to control temperature in the DUT.

24. A temperature control system for providing a temperature-controlled fluid, comprising:
a source of fluid;
a fluid chiller receiving fluid from the source, chilling the fluid to generate the temperature-controlled fluid and outputting the temperature-controlled fluid; and a filter receiving the temperature-controlled fluid, the filter having a filter mesh sized to capture ice particles in the temperature-controlled fluid, wherein the filter mesh comprises stainless steel.

25. The temperature control system of claim 24, wherein the temperature-controlled fluid comprises air.

26. The temperature control system of claim 24, wherein the temperature-controlled fluid comprises a liquid.

27. The temperature control system of claim 24, wherein the temperature-controlled fluid is directed onto a device under test (DUT) to control temperature in the DUT.

28. A temperature control system for providing a temperature-controlled fluid, comprising:
a source of fluid;
a fluid chiller receiving fluid from the source, chilling the fluid to generate the temperature-controlled fluid and outputting the temperature-controlled fluid; and a filter receiving the temperature-controlled fluid, the filter having a filter mesh sized to capture ice

particles in the temperature-controlled fluid, wherein the filter mesh is in a Dutch weave configuration.

29. The temperature control system of claim 28, wherein the temperature-controlled fluid comprises air.

30. The temperature control system of claim 28, wherein the temperature-controlled fluid comprises a liquid.

31. The temperature control system of claim 28, wherein the temperature-controlled fluid is directed onto a device under test (DUT) to control temperature in the DUT.

32. A temperature control system for providing a temperature-controlled fluid, comprising:

a source of fluid;

a fluid chiller receiving fluid from the source, chilling the fluid to generate the temperature-controlled fluid and outputting the temperature-controlled fluid;

a heater for heating the temperature-controlled fluid; and

a filter receiving the temperature-controlled fluid, the filter having a filter mesh sized to capture ice particles in the temperature-controlled fluid.

33. The temperature control system of claim 32, wherein the heater receives the temperature-controlled fluid from the filter.

34. The temperature control system of claim 33, wherein the temperature-controlled fluid is directed onto a device under test (DUT) to control temperature in the DUT.

35. The temperature control system of claim 32, wherein the temperature-controlled fluid comprises air.

36. The temperature control system of claim 32, wherein the temperature-controlled fluid comprises a liquid.

37. The temperature control system of claim 32, wherein the temperature-controlled fluid is directed onto a device under test (DUT) to control temperature in the DUT.

38. A temperature control system for providing a temperature-controlled fluid, comprising:

a source of fluid;

a fluid chiller receiving fluid from the source, chilling the fluid to generate the

temperature-controlled fluid and outputting the temperature-controlled fluid; and a filter receiving the temperature-controlled fluid, the filter having a filter mesh sized to capture ice particles in the temperature-controlled fluid, wherein the temperature-controlled fluid is directed onto a device under test (DUT) to control temperature in the DUT.

39. The temperature control system of claim 38, wherein the temperature-controlled fluid comprises air.

40. The temperature control system of claim 38, wherein the temperature-controlled fluid comprises a liquid.