

## **WHAT IS CLAIMED IS:**

1. A substrate processing apparatus, comprising:
  - a first process module that includes a first process container for processing a substrate;
  - a second process module that is disposed adjacent to a side surface of the first process container and includes a second process container for processing a substrate;
  - a first utility system that is disposed adjacent to a back surface of the first process module and includes:
    - a first exhaust system configured to exhaust an inside of the first process container; and
    - a first supply system configured to supply a processing gas into the first process container; and
    - a second utility system that is disposed adjacent to a back surface of the second process module and includes:
      - a second exhaust system configured to exhaust an inside of the second process container; and
      - a second supply system configured to supply a processing gas into the second process container,
  - wherein the first supply system and the first exhaust system are disposed in a row in a direction to the back surface of the first process module,
  - wherein the second supply system and the second exhaust system are disposed in a row in a direction to the back surface of the second process module, and
  - wherein a maintenance area, which is commonly used for the first process module and the second process module, is formed between the first utility system and the second utility system, behind the back surface of the first process module and the back surface of the second process module.
2. The substrate processing apparatus of Claim 1, wherein the first utility system includes:

a first supply box including the first supply system; and  
a first exhaust box including the first exhaust system, and  
wherein the second utility system includes:  
a second supply box including the second supply system; and  
a second exhaust box including the second exhaust system.

3. The substrate processing apparatus of Claim 1 or 2, wherein the maintenance area constitutes an area for maintaining the first process container and the second process container.

4. The substrate processing apparatus of Claim 1 or 2, wherein the first utility system is installed such that an outer side surface of the first process module opposite to the second process module and an outer side surface of the first utility system opposite to the second process module are flush with each other, and

wherein the second utility system is installed such that an outer side surface of the second process module opposite to the first process module and an outer side surface of the second utility system opposite to the first process module are flush with each other.

5. The substrate processing apparatus of Claim 4, wherein the first process container is configured such that an exhaust pipe of the first process container faces the outer side surface of the first process module which is configured to be flush with the outer side surface of the first utility system, and

wherein the second process container is configured such that an exhaust pipe of the second process container faces the outer side surface of the second process module which is configured to be flush with the outer side surface of the second utility system.

6. The substrate processing apparatus of Claim 1 or 2, wherein a first controller box, which accommodates a controller configured to control the first exhaust system and the first

supply system, is installed behind the first exhaust system and the first supply system in the first utility system, and

wherein a second controller box, which accommodates a controller configured to control the second exhaust system and the second supply system, is installed behind the second exhaust system and the second supply system in the second utility system.

7. The substrate processing apparatus of Claim 1 or 2, wherein the first process module and the second process module are plane-symmetrically disposed with respect to a surface on which the first process module and the second process module are adjacent to each other, and

wherein the first utility system and the second utility system are plane-symmetrically disposed with respect to the adjacent surface.

8. The substrate processing apparatus of Claim 1 or 2, wherein widths of portions of the first utility system and the second utility system that are close to front surfaces thereof are narrower than widths of portions of the first utility system and the second utility system that are close to back surfaces thereof, and

wherein a distance at the front surfaces between the first utility system and the second utility system is larger than a distance at the back surfaces between the first utility system and the second utility system.

9. The substrate processing apparatus of Claim 2, wherein the first supply box is installed such that an outer side surface of the first process module opposite to the second process module and an outer side surface of the first supply box opposite to the second process module are flush with each other, and

wherein the second supply box is installed such that an outer side surface of the second process module opposite to the first process module and an outer side surface of the second supply box opposite to the first process module are flush with each other.

10. The substrate processing apparatus of Claim 1 or 2, wherein the first process module and the second process module are disposed to have no gap therebetween.

11. The substrate processing apparatus of Claim 2, wherein the first exhaust box accommodates at least an APC (Auto Pressure Controller) valve included in the first exhaust system, and

wherein the second exhaust box accommodates at least an APC valve included in the second exhaust system.

12. The substrate processing apparatus of Claim 2, wherein the first supply box accommodates at least a gas accumulation system included in the first supply system, and

wherein the second supply box accommodates at least a gas accumulation system included in the second supply system.

13. The substrate processing apparatus of Claim 1 or 2, wherein maintenance in a second transfer chamber is performed from the maintenance area when the substrate is processed in the first process container, the second transfer chamber being disposed below the second process container.

14. The substrate processing apparatus of Claim 1 or 2, wherein maintenance in a first transfer chamber is performed from the maintenance area when the substrate is processed in the second process container, the first transfer chamber being disposed below the first process container.

15. The substrate processing apparatus of Claim 1 or 2, further comprising a controller configured to control a pressure in a first transfer chamber disposed below the first process container and a pressure in a transshipment chamber disposed adjacent to the first transfer chamber,

wherein the controller is configured to, before maintenance in the first transfer chamber is performed from the maintenance area, increase an oxygen concentration in the first transfer chamber while maintaining the pressure in the first transfer chamber to be lower than the pressure in the transshipment chamber.

16. The substrate processing apparatus of Claim 1 or 2, wherein the maintenance area is commonly used for a first transfer chamber of the first process module and a second transfer chamber of the second process module.

17. The substrate processing apparatus of Claim 1 or 2, wherein the maintenance area is adjacent to a back surface of a first transfer chamber of the first process module and a back surface of a second transfer chamber of the second process module, and is commonly used for the first transfer chamber and the second transfer chamber by configuring neither the first utility system nor the second utility system to exist between the first utility system and the second utility system.

18. The substrate processing apparatus of Claim 1 or 2, wherein the maintenance area is adjacent to a back surface of a first maintenance door of a first transfer chamber of the first process module and a back surface of a second maintenance door of a second transfer chamber of the second process module, and is commonly used for opening/closing of the first maintenance door and the second maintenance door by configuring neither the first utility system nor the second utility system to exist between the first utility system and the second utility system.

19. A method of manufacturing a semiconductor device using a substrate processing apparatus comprising:

a first utility system that is disposed adjacent to a back surface of a first process module including a first process container and includes a first exhaust system and a first supply system;

and

a second utility system that is disposed adjacent to a back surface of a second process module including a second process container and includes a second exhaust system and a second supply system,

wherein the first supply system and the first exhaust system are disposed in a row in a direction to the back surface of the first process module,

wherein the second supply system and the second exhaust system are disposed in a row in a direction to the back surface of the second process module,

wherein a maintenance area, which is commonly used for the first process module and the second process module, is formed between the first utility system and the second utility system, behind the back surface of the first process module and the back surface of the second process module, and

wherein the method comprises:

a first process of processing a substrate within the first process container by supplying a processing gas into the first process container from the first supply system and exhausting an inside of the first process container by the first exhaust system; and

a second process of processing a substrate within the second process container by supplying a processing gas into the second process container from the second supply system and exhausting an inside of the second process container by the second exhaust system.

20. The method of Claim 19, wherein the first process and the second process are performed by the substrate processing apparatus comprising:

the first utility system including:

a first supply box including the first supply system; and

a first exhaust box including the first exhaust system; and

the second utility system including:

a second supply box including the second supply system; and

a second exhaust box including the second exhaust system.

21. The method of Claim 19 or 20, wherein the first process and the second process are performed by the substrate processing apparatus that is configured such that the first process container and the second process container are maintained from the maintenance area.

22. The method of Claim 19 or 20, wherein the first process and the second process are performed by the substrate processing apparatus that is configured such that:

the first utility system is installed such that an outer side surface of the first process module opposite to the second process module and an outer side surface of the first utility system opposite to the second process module are flush with each other; and

the second utility system is installed such that an outer side surface of the second process module opposite to the first process module and an outer side surface of the second utility system opposite to the first process module are flush with each other.

23. The method of Claim 22, wherein the first process includes exhausting from an exhaust pipe of the first process container, the exhaust pipe of the first process container being configured to face the outer side surface of the first process module which is configured to be flush with the outer side surface of the first utility system, and

wherein the second process includes exhausting from an exhaust pipe of the second process container, the exhaust pipe of the second process container being configured to face the outer side surface of the second process module which is configured to be flush with the outer side surface of the second utility system.

24. The method of Claim 19 or 20, wherein, in the first process, the first exhaust system and the first supply system are controlled by a controller accommodated in a first controller box, the first controller box being installed behind the first exhaust system and the first supply system in the first utility system, and

wherein, in the second process, the second exhaust system and the second supply system are controlled by a controller accommodated in a second controller box, the second controller box being installed behind the second exhaust system and the second supply system in the second utility system.

25. The method of Claim 19 or 20, wherein the first process and the second process are performed by the substrate processing apparatus that is configured such that:

the first process module and the second process module are plane-symmetrically disposed with respect to a surface on which the first process module and the second process module are adjacent to each other; and

the first utility system and the second utility system are plane-symmetrically disposed with respect to the adjacent surface.

26. The method of Claim 19 or 20, wherein the first process and the second process are performed by the substrate processing apparatus that is configured such that:

widths of portions of the first utility system and the second utility system that are close to front surfaces thereof are narrower than widths of portions of the first utility system and the second utility system that are close to back surfaces thereof; and

a distance at the front surfaces between the first utility system and the second utility system is larger than a distance at the back surfaces between the first utility system and the second utility system.

27. The method of Claim 20, wherein the first process and the second process are performed by the substrate processing apparatus that is configured such that:

the first supply box is installed such that an outer side surface of the first process module opposite to the second process module and an outer side surface of the first supply box opposite to the second process module are flush with each other; and

the second supply box is installed such that an outer side surface of the second process module opposite to the first process module and an outer side surface of the second supply box opposite to the first process module are flush with each other.

28. The method of Claim 19 or 20, wherein the first process and the second process are performed by the substrate processing apparatus, in which the first process module and the second process module are disposed to have no gap therebetween.

29. The method of Claim 20, wherein the first process includes controlling the exhausting of the inside of the first process container by an APC valve accommodated in the first exhaust box and included in the first exhaust system, and

wherein the second process includes controlling the exhausting of the inside of the second process container by an APC valve accommodated in the second exhaust box and included in the second exhaust system.

30. The method of Claim 20, wherein the first process includes controlling the supplying of the processing gas into the first process container by a gas accumulation system accommodated in the first supply box and included in the first supply system, and

wherein the second process includes controlling the supplying of the processing gas into the second process container by a gas accumulation system accommodated in the second supply box and included in the second supply system.

31. The method of Claim 19 or 20, wherein, in the first process, maintenance in a second transfer chamber is performed from the maintenance area, the second transfer chamber being disposed below the second process container.

32. The method of Claim 19 or 20, wherein, in the second process, maintenance in a first transfer chamber is performed from the maintenance area, the first transfer chamber being disposed below the first process container.

33. The method of Claim 19 or 20, wherein the second process includes increasing an oxygen concentration in a first transfer chamber disposed below the first process container while maintaining a pressure in the first transfer chamber lower than a pressure in a transshipment chamber disposed adjacent to the first transfer chamber.

34. The method of Claim 19 or 20, wherein the first process and the second process are performed by the substrate processing apparatus, in which the maintenance area is commonly used for a first transfer chamber of the first process module and a second transfer chamber of the second process module.

35. The method of Claim 19 or 20, wherein the first process and the second process are performed by the substrate processing apparatus, in which the maintenance area is adjacent to a back surface of a first transfer chamber of the first process module and a back surface of a second transfer chamber of the second process module, and is commonly used for the first transfer chamber and the second transfer chamber by configuring neither the first utility system nor the second utility system to exist between the first utility system and the second utility system.

36. The method of Claim 19 or 20, wherein the first process and the second process are performed by the substrate processing apparatus, in which the maintenance area is adjacent to a back surface of a first maintenance door of a first transfer chamber of the first process module and a back surface of a second maintenance door of a second transfer chamber of the second process module, and is commonly used for opening/closing of the first maintenance door and the

second maintenance door by configuring neither the first utility system nor the second utility system to exist between the first utility system and the second utility system.

37. A program stored in a computer-readable recording medium,

wherein a substrate processing apparatus comprises:

a first utility system that is disposed adjacent to a back surface of a first process module including a first process container and includes a first exhaust system and a first supply system; and

a second utility system that is disposed adjacent to a back surface of a second process module including a second process container and includes a second exhaust system and a second supply system,

wherein the first supply system and the first exhaust system are disposed in a row in a direction to the back surface of the first process module,

wherein the second supply system and the second exhaust system are disposed in a row in a direction to the back surface of the second process module,

wherein a maintenance area, which is commonly used for the first process module and the second process module, is formed between the first utility system and the second utility system, behind the back surface of the first process module and the back surface of the second process module, and

wherein the program causes the substrate processing apparatus to perform:

a first process of processing a substrate within the first process container by supplying a processing gas into the first process container from the first supply system and exhausting an inside of the first process container by the first exhaust system; and

a second process of processing a substrate within the second process container by supplying a processing gas into the second process container from the second supply system and exhausting an inside of the second process container by the second exhaust system.

38. A computer-readable recording medium storing a program,

wherein a substrate processing apparatus comprises:

a first utility system that is disposed adjacent to a back surface of a first process module including a first process container and includes a first exhaust system and a first supply system; and

a second utility system that is disposed adjacent to a back surface of a second process module including a second process container and includes a second exhaust system and a second supply system,

wherein the first supply system and the first exhaust system are disposed in a row in a direction to the back surface of the first process module,

wherein the second supply system and the second exhaust system are disposed in a row in a direction to the back surface of the second process module,

wherein a maintenance area, which is commonly used for the first process module and the second process module, is formed between the first utility system and the second utility system, behind the back surface of the first process module and the back surface of the second process module, and

wherein the program causes the substrate processing apparatus to perform:

a first process of processing a substrate within the first process container by supplying a processing gas into the first process container from the first supply system and exhausting an inside of the first process container by the first exhaust system; and

a second process of processing a substrate within the second process container by supplying a processing gas into the second process container from the second supply system and exhausting an inside of the second process container by the second exhaust system.