(TRANSLATION)

Amendment of Claims under PCT Article 19(1)

What is claimed is:

1. (Currently amended) A method for supplying inert gas to an STB in a semiconductor wafer production system, the method comprising:

a step of sensing that a FOUP is loading on the STB and generating a first input signal;

a step of opening a valve for inert gas and supplying nitrogen gas to the FOUP based on the first input signal;

a step of displaying a port-adding screen on a user input unit when another STB is physically mounted on the semiconductor wafer production system;

a step of activating an input-output device of a port after the port is added by software using the port-adding screen; and

a step of causing the added port to be activated when the added port is disposed on a port of the semiconductor wafer production system using the user input unit, thereby attaching and using another STB without stopping the operation of the semiconductor wafer production system.

2. The method for supplying inert gas to an STB in a

semiconductor wafer production system according to Claim 1,

wherein the inert gas includes nitrogen gas.

3. The method for supplying inert gas to an STB in a semiconductor wafer production system according to Claim 1, further comprising:

a step of measuring a pressure and an amount of flow of the inert gas in the FOUP and controlling the supply of the inert gas using the measured pressure and amount of flow of the inert gas.

4. The method for supplying inert gas to an STB in a semiconductor wafer production system according to Claim 1, further comprising:

a step of measuring an amount of the inert gas pulled into the FOUP and an amount of the inert gas pulled out from the FOUP and thereby controlling the supply of the inert gas.

5. The method for supplying inert gas to an STB in a semiconductor wafer production system according to Claim 1, further comprising:

a step of acquiring ID information of the FOUP when the FOUP is loading on the STB and generating a second input signal,

wherein, the step of opening the valve of the inert gas and supplying nitrogen gas to the FOUP based on the first input signal includes a step of controlling and

supplying the nitrogen gas to the FOUP based on the first input signal and the second input signal.

6. (Cancelled)

7. The method for supplying inert gas to an STB in a semiconductor wafer production system according to Claim 1,

wherein there is a plurality of the STBs, and

wherein the method further comprises:

a step of causing a port to be disabled and deactivating the input-output device thereof if a FOUP does not exist in one of the plurality of STBs; and

a step of cutting off an input-output signal of the port and eliminating a signal cable of the port when the deactivated port is removed through a port-removing screen.

8. (Currently amended) A semiconductor wafer production system comprising:

an STB on which a FOUP is mounted on a FOUP port; and

an inert gas supplying device that supplies inert gas to the STB based on a first input signal when the first input signal is received, which is generated if the FOUP is mounted on the STB;

wherein the STB includes:

a pull-in gas sensor that measures an amount of the inert gas pulled in the FOUP; and

a pull-out gas sensor that measures an amount of the

inert gas pulled out from the FOUP, and

wherein the inert gas supplying device controls the supply of the inert gas based on information acquired from the pull-in gas sensor and the pull-out gas sensor.

9. The semiconductor wafer production system according to Claim 8,

wherein the inert gas includes nitrogen gas.

10. The semiconductor wafer production system according to Claim 8,

wherein the STB includes a gas pressure sensor that measures a pressure of the inert gas in the FOUP,

wherein the inert gas supplying device includes:

a valve for inert gas that is opened by the first input signal;

a pump that applies the pressure with respect to the inert gas; and

a control unit that controls the pump such that the supply of the inert gas is controlled, using pressure information of the inert gas generated by the gas pressure sensor.

11. (Cancelled)

12. The semiconductor wafer production system according to Claim 8,

wherein the STB acquires ID information of the FOUP and causes a second input signal to be generated when the

FOUP is loading, and

wherein the inert gas supplying device controls and supplies nitrogen gas to the FOUP based on the first input signal and the second input signal.

What is claimed is:

1. A method for supplying inert gas to a side track buffer (STB) in a semiconductor wafer production system, the method comprising: a step of sensing that a front opening unified POD (FOUP) is loading on the STB and generating a first input signal; a step of opening a valve for inert gas and supplying nitrogen gas to the FOUP based on the first input signal, a step of displaying a port-adding screen on a user input unit when another STB is physically mounted on the semiconductor wafer production system; a step of activating an input-output device of a port after the port is added by software using the port-adding screen; and a step of causing the added port to be activated when the added port is disposed on a port of the semiconductor wafer production system using the user input unit.

2. The method for supplying inert gas to an STB in a semiconductor wafer production system according to claim 1, wherein the inert gas includes nitrogen gas.

3. The method for supplying inert gas to an STB in a semiconductor wafer production system according to claim 1, further comprising: a step of measuring a pressure and an amount of flow of the inert gas in the FOUP and controlling the supply of the inert gas using the measured pressure and amount of flow of the inert gas.

4. The method for supplying inert gas to an STB in a semiconductor wafer production system according to claim 1, further comprising: a step of measuring an amount of the inert gas pulled into the FOUP and an amount of the inert gas pulled out from the FOUP and thereby controlling the supply of the inert gas.

5. The method for supplying inert gas to an STB in a semiconductor wafer production system according to claim 1, further comprising: a step of acquiring ID information of the FOUP when the FOUP is loading on the STB and generating a second input signal, wherein, the step of opening the valve of the inert gas and supplying nitrogen gas to the FOUP based on the first input signal includes a step of controlling and supplying the nitrogen gas to the FOUP based on the first input signal and the second input signal.

6. The method for supplying inert gas to an STB in a semiconductor wafer production system according to claim 1, wherein there is a plurality of the STBs, and wherein the method further comprises: a step of causing a port to be disabled and deactivating the input-output device thereof if a FOUP does not exist in one of the plurality of STBs; and a step of cutting off an input-output signal of the port and eliminating a signal cable of the port when the deactivated port is removed through a port-removing screen.

7. A semiconductor wafer production system comprising: a side track buffer (STB) on which a front opening unified POD (FOUP) is mounted on a FOUP port; an inert gas supplying device that supplies inert gas to the STB based on a first input signal when the first input signal is received, which is generated if the FOUP is mounted on the STB, a pull-in gas sensor that measures an amount of the inert gas pulled in the FOUP; and a pull-out gas sensor that measures an amount of the inert gas pulled out from the FOUP, wherein an inert gas supplying device controls the supply of the inert gas based on information acquired from the pull-in gas sensor and the pull-out gas sensor.

8. The semiconductor wafer production system according to claim 7, wherein the inert gas includes nitrogen gas.

9. The semiconductor wafer production system according to claim 7, wherein the STB includes a gas pressure sensor that measures a pressure of the inert gas in the FOUP, wherein the inert gas supplying device includes: a valve for inert gas that is opened by the first input signal; a pump that applies the pressure with respect to the inert gas; and a control unit that controls the pump such that the supply of the inert gas is controlled, using pressure information of the inert gas generated by the gas pressure sensor.

10. The semiconductor wafer production system according to claim 7, wherein the STB acquires ID information of the FOUP and causes a second input signal to be generated when the FOUP is loading, and wherein the inert gas supplying device controls and supplies nitrogen gas to the FOUP based on the first input signal and the second input signal.

11. A method for supplying inert gas to a plurality of side track buffers (STB's) in a semiconductor wafer production system, the method comprising: a step of sensing that a front opening unified POD (FOUP) is loading on the STB's and generating a first input signal; a step of opening a valve for inert gas and supplying nitrogen gas to the FOUP based on the first input signal; a step of causing a port to be disabled and deactivating an input-output device thereof if a FOUP does not exist in one of the plurality of STB's; and a step of cutting off an input-output signal of the port and eliminating a signal cable of the port when the deactivated port is removed through a port-removing screen.