WHAT IS CLAIMED IS:

1. A processing apparatus comprising:

a first cassette stage on which a first cassette accommodating a plurality of wafers is mounted;

a second cassette stage on which a second cassette accommodating a plurality of wafers is mounted;

a chuck table that has a holding surface and holds the wafer on the holding surface;

a processing unit that processes the wafer;

a conveying-in mechanism that conveys the wafer onto the holding surface of the chuck table;

a conveying-out mechanism that conveys out the wafer from the holding surface of the chuck table;

a setting section that sets first processing conditions that are used at the time of processing the wafer accommodated in the first cassette mounted on the first cassette stage and second processing conditions that are different from the first processing conditions and that are used at the time of processing the wafer accommodated in the second cassette mounted on the second cassette stage;

a selecting section that selects either one of the first cassette stage and the second cassette stage;

a conveyance control section that, when processing

of all the wafers accommodated in a cassette mounted on a cassette stage, according to processing conditions corresponding to the cassette stage selected by the selecting section, is ended and the last wafer is conveyed out from the holding surface, making the holding surface vacant, ~~immediately~~ before the last wafer is accommodated in the cassette mounted on the cassette stage, conveys the wafer accommodated in a cassette mounted on the other cassette stage onto the holding surface; and

a changeover section that, when the wafer to be mounted on the holding surface is changed from the wafer conveyed out from the one cassette stage side to the wafer conveyed out from the other cassette stage side, changes over the processing conditions to the processing conditions corresponding to the other cassette stage.

2. The processing apparatus according to claim 1, further comprising:

a turntable on which a plurality of the chuck tables having the holding surfaces are disposed, and are disposed to be rotatable between a conveying-in position where the wafer can be conveyed onto the holding surface by the conveying-in mechanism and a processing position where the processing unit processes the wafer held by the

holding surface,

wherein, when processing of wafers is ended after all the wafers accommodated in the cassette mounted on the one cassette stage are conveyed onto the holding surface and, by conveying out the wafer from the holding surface, one of the plurality of holding surfaces becomes vacant, the conveyance control section immediately conveys the wafer accommodated in the cassette mounted on the other cassette stage onto the vacant holding surface.

3. The processing apparatus according to claim 1, wherein

the conveyance control section is connected to a pressure monitor means connected to the holding surface and measures the magnitude of pressure on the holding surface,

when the last wafer is conveyed out from the holding surface, making the holding surface vacant, said vacancy is recognized by a change in the pressure being monitored by the pressure monitor means, and is transmitted as an electrical signal to the conveyance control section,

when the electrical signal is transmitted to the conveyance control section, the second cassette stage is selected by the selecting section, and

the wafer accommodated in the second cassette mounted on the second cassette stage is conveyed onto the holding surface.

4. The processing apparatus according to claim 1 or claim 2, wherein the conveyance control section is further connected to

a recognition means that recognizes a number of wafers preliminarily accommodated in the first cassette; and

a counter that counts a number of wafers drawn out from the first cassette and processed.

5. The processing apparatus according to claim 4, wherein

a timing when a processing of the last wafer is to be ended is recognized based on the number of wafers preliminarily accommodated in the first cassette which is recognized by the recognition means and the number of the processed wafers which is counted by the counter, and

when the last wafer is conveyed out from the holding surface, making the holding surface vacant, such vacancy is recognized when the number of the wafers preliminarily accommodated in the first cassette which is recognized by the recognition means and the number of the processed wafers which is counted by the counter match

with each other.