

DETECTION METHOD, SUBSTRATE PROCESSING SYSTEM, AND CONTROL PROGRAM

ABSTRACT

A method of detecting opening and closing of a lid of a substrate container configured to accommodate a plurality of substrates to be processed in a substrate processing system in multiple stages, wherein the substrate processing system includes a loader module configured to deliver the substrates to and from the substrate container, wherein the loader module includes a load port on which the substrate container is placed, wherein the load port includes a port door and is configured such that, in a first state in which the lid of the substrate container is in contact with and engaged with the port door and the lid of the substrate container is open, an interior of the substrate container is in communication with an interior of the loader module, wherein the load port further includes an exhauster configured to exhaust the interior of the substrate container in a state in which the substrate container is engaged, wherein the exhauster includes a flow rate measurer configured to measure an exhaust flow rate, which is a flow rate of a gas exhausted from the interior of the substrate container, and wherein the detection method includes: (a) transitioning from the first state to a second state in which the lid of the substrate container is closed; (b) in the second state, releasing the contact between the port door and the lid and moving the substrate container in a direction away from the port door; and (c) during execution of (a) and (b), determining whether closing of the lid of the substrate container has been performed normally by measuring the exhaust flow rate while continuously exhausting the interior of the substrate container.

(Fig. 11)