

**SUBSTRATE PROCESSING APPARATUS, METHOD OF MANUFACTURING
SEMICONDUCTOR DEVICE, PRESSURE CONTROL DEVICE, AND SUBSTRATE
PROCESSING PROGRAM**

ABSTRACT

A substrate processing apparatus 100 includes a process container 20 in which a substrate is processed, an exhaust path 50 that is connected between the process container 20 and an exhaust device 60 and configured to branch into a first exhaust line and a second exhaust line between the process container 20 and the exhaust device 60, a first valve 58A that is installed in the first exhaust line 52 and configured to be capable of continuously adjusting an opening degree of the first valve, a second valve 58B that is installed in the second exhaust line 54 and configured to be capable of continuously adjusting an opening degree of the second valve, and a pressure control device configured to be capable of selecting one valve among the first valve 58A and the second valve 58B according to a pressure setting value in the process container, which is set at each time for processing the substrate, such that a pressure detection value detected by a pressure detector approaches the pressure setting value; setting an opening degree of an other valve, which is not selected among the first valve and the second valve, to a constant state, and adjusting an opening degree of the selected one valve while maintaining the opening degree of the selected one valve at a value greater than zero.

Fig. 1