

ABSTRACT

A film forming method includes: forming a film of a reaction product on a substrate in a processing container by alternately and repeatedly supplying a raw material gas and a reaction gas; purging the processing container by supplying a purge gas during each purge period between a first period of supplying one of the raw material and reaction gases and a subsequent second period of supplying the other of the raw material and reaction gases; and changing an opening degree of a valve provided in an exhaust path exhausting the processing container and configured to increase an exhaust amount as the opening degree increases, wherein the opening degree is set to a first opening degree until a midpoint of one of the first and second periods, and to a second opening degree greater than the first opening degree from the midpoint to and through the subsequent purge period.

(FIG. 12)