

ABSTRACT

Provided is a high pressure heat treatment apparatus including: an internal chamber accommodating an object to be heat-treated; an external chamber including a housing and a partition plate partitioning the housing into a high-temperature zone accommodating the internal chamber and a low-temperature zone having a lower temperature than the high-temperature zone, the partition plate including a discharge hole for allowing the high-temperature zone and the low-temperature zone to communicate with each other; a gas supply module configured to supply a process gas for the heat treatment to the internal chamber at a first pressure higher than that of the atmosphere, and supply a protective gas to the high-temperature zone and the low-temperature zone at a second pressure set in relation to the first pressure; and a discharge module configured to open the discharge hole to discharge the protective gas in the high-temperature zone to the low-temperature zone.

[FIG. 1]