

SUBSTRATE ROTATION DEVICE, SUBSTRATE CLEANING DEVICE, SUBSTRATE
PROCESSING DEVICE, AND CONTROL METHOD OF SUBSTRATE ROTATION
DEVICE

ABSTRACT

An advanced substrate rotation device is provided. A substrate rotation device is disclosed. The substrate rotation device includes an outer cylinder, an inner cylinder positioned inside the outer cylinder, a motor for rotating the inner cylinder, a magnetic bearing for magnetically levitating the inner cylinder, and a substrate holder disposed on the inner cylinder. The motor is a radial motor including a motor stator mounted on the outer cylinder, and a motor rotor mounted on the inner cylinder. The magnetic bearing is a radial magnetic bearing including a magnetic bearing stator mounted on the outer cylinder, and a magnetic bearing rotor mounted on the inner cylinder. The magnetic bearing is configured to magnetically levitate the inner cylinder with an attractive force between the magnetic bearing stator and the magnetic bearing rotor.

Selected Drawing: Fig. 2