WHAT IS CLAIMED IS:

1. A substrate processing apparatus comprising:

a substrate polishing device; and

a substrate cleaning unit configured to clean a substrate polished by the substrate polishing device, wherein

the substrate cleaning unit includes:

a cleaning module configured to perform a cleaning of the substrate; and

a cleaning unit conveyance mechanism configured to convey the substrate in the substrate cleaning unit,

the cleaning unit conveyance mechanism includes:

a hand configured to hold the substrate; and

a hand open/close mechanism configured to open and close the hand,

the substrate processing apparatus further includes a hand cleaning unit configured to clean the hand, and

the hand cleaning unit includes:

a hand cleaning tank disposed on a side portion of the cleaning module in a direction in which the hand opens and closes, the hand cleaning tank being configured to house the hand; and

a cleaning liquid injection mechanism configured to inject a cleaning liquid toward a predetermined position when the hand is housed in the hand cleaning tank.

2. The substrate processing apparatus according to claim 1, wherein

the predetermined position includes a position where the hand is to be housed.

3. The substrate processing apparatus according to claim 1, wherein

the cleaning unit conveyance mechanism further includes a hand up-and-down motion mechanism that moves the hand up and down, and

the hand cleaning tank is disposed at a position where the hand is allowed to be housed when the hand is opened and moved down by the hand open/close mechanism and the

hand up-and-down motion mechanism.

4. The substrate processing apparatus according to claim 1, wherein

the hand is configured to hold the substrate with a claw, and

the predetermined position includes a position where the claw is to be housed.

5. The substrate processing apparatus according to claim 1, wherein

the hand cleaning tank has a bottom portion where an opening is formed, and

the bottom portion of the hand cleaning tank has a shape lowered toward the opening.

6. The substrate processing apparatus according to claim 1, wherein

the hand cleaning tank has an open upper portion.

7. The substrate processing apparatus according to claim 1, wherein

the substrate processing apparatus further includes a control unit, and

the control unit controls the substrate processing apparatus such that the cleaning liquid is injected toward the predetermined position in at least any case of:

after the substrate is conveyed to the cleaning module;

before the substrate is conveyed from the cleaning module; and

in a standby time of the substrate cleaning unit.

8. A method for cleaning the hand in the substrate processing apparatus according to claim 1, the hand cleaning method comprising:

housing the hand in the hand cleaning tank; and

injecting the cleaning liquid toward the predetermined position using the cleaning liquid injection mechanism.