WHAT IS CLAIMED IS:

1. An apparatus for polishing of an object to be polished using a polishing pad having a polishing surface, the apparatus comprising:

a polishing table for supporting the polishing pad, the polishing table being configured to be rotatable;

a substrate holding unit configured to hold the object to be polished and pressing the object to be polished against the polishing pad; and

a polishing-liquid removing unit configured to remove polishing liquid from the polishing surface, wherein

the polishing-liquid removing unit includes:

a rinse unit configured to jet cleaning liquid onto the polishing surface; and

a sucking unit configured to suck the polishing liquid on the polishing surface onto which the cleaning liquid is jetted,

the rinse unit includes a cleaning space, forming an internal space which is surrounded by a sidewall and opens to the polishing surface, in which internal space the cleaning liquid is jetted onto the polishing surface, and

the sidewall includes an opening section for opening the cleaning space toward a radial direction outer side of the polishing table , wherein the cleaning space is continuous to the opening section on the polishing surface, and the cleaning liquid, which is jetted on the polishing surface in the cleaning space, is discharged directly from the polishing surface in the cleaning space via the opening section, the sidewall is disposed on an upstream side and a downstream side in a rotating direction of the polishing table and on a center side of the polishing table so that the side wall surrounds the internal space on three sides, wherein the internal space laterally opens only at the opening section.

2. The apparatus according to claim 1, wherein the rinse unit and the sucking unit are configured as an integral block or disposed adjacent to each other.

3. The apparatus according to claim 1 or 2, wherein the polishing-liquid removing unit is disposed on an outer side of the substrate holding unit along an external shape of the substrate holding unit.

4. The apparatus according to claim 3, further comprising a supporting arm configured to support the substrate holding unit, wherein

the polishing-liquid removing unit is fixed to the supporting arm.

5. The apparatus according to claim 3, further comprising a lifting and lowering shaft configured to lift and lower the substrate holding unit, wherein

the polishing-liquid removing unit is attached to the lifting and lowering shaft.

6. The apparatus according to any one of claims 3 to 5, wherein the polishing-liquid removing unit has an arcuate shape.

7. The apparatus according to any one of claims 1 to 6, further comprising a pressing mechanism configured to press the rinse unit and/or the sucking unit against the polishing surface.

8. The apparatus according to any one of claims 1 to 7, further comprising a temperature adjusting unit disposed on a downstream side of the polishing-liquid removing unit in a rotating direction of the polishing table.

9. The apparatus according to any one of claims 1 to 8, further comprising a supplying device for supplying the polishing liquid to the polishing surface in a state in which the supplying device is pressed against the polishing pad.

10. A method for polishing an object to be polished by rotating a polishing table attached with a polishing pad and pressing the object to be polished against the polishing pad, the method comprising:

preparing a polishing-liquid removing unit including a rinse unit and a sucking unit, the rinse unit including a cleaning space as an internal space which is surrounded by a sidewall and opens to a polishing surface, in which internal space the cleaning liquid is jetted onto the polishing surface, the sidewall including an opening section for opening the cleaning space toward a radial direction outer side of the polishing table, the cleaning space being

continuous to the opening section on the polishing surface, wherein the sidewall is disposed on an upstream side and a downstream side in a rotating direction of the polishing table and on a center side of the polishing table so that the side wall surrounds the internal space on three sides, wherein the internal space laterally opens only at the opening section;

jetting, with the rinse unit, cleaning liquid onto the polishing surface of the polishing pad in the cleaning space;

discharging the cleaning liquid, which is jetted on the polishing surface in the cleaning space, directly from the polishing surface in the cleaning space via the opening section open to a radial direction outer side of the polishing table in the sidewall of the rinse unit; and

sucking, with the sucking unit, polishing liquid on the polishing surface onto which the cleaning liquid is jetted.