CLAIMS

WHAT IS CLAIMED IS:

1. A process chamber of a semiconductor process apparatus comprising a chamber body, a base, and a magnetic conductive device, wherein:

the base is arranged in the chamber body, and the base ~~includes a carrier surface~~is configured to carry a wafer; and

the magnetic conductive device includes a magnet structure and a magnetic conductive structure made of a soft magnetic material, the magnet structure is arranged around two sides of the base and configured to provide a magnetic field ~~above~~ near the base~~,~~; the magnetic conductive structure is arranged ~~under~~ in~~the carrier surface of~~ the base, has a preset distance from ~~the carrier~~an upper surface of the base, and is configured to ~~guide distribution of~~constrain magnetic field lines in an arc shape of the magnet~~ic~~ structure to magnetic field lines parallel to the upper surface of the base~~field above the base~~ to ~~cause~~ guide intensity of the magnetic field to be evenly distributed ~~above the base~~ and orientations~~directions~~ of the magnetic field ~~lines~~ to be consistent ~~at different positions of the carrier surface~~.

2. The process chamber according to claim 1, wherein the magnet~~ic conductive~~ structure includes a fixing bracket and a plurality of magnet columns, the fixing bracket is arranged around the two sides of the base; the plurality of magnet columns are evenly distributed on the fixing bracket, and N poles and S poles of all the magnet columns are arranged along a first direction at a same height, the first direction being parallel to a radial direction of the base ~~magnetic conductive assembly, the magnetic conductive assembly includes a plurality of first magnetic conductive bars, the plurality of first magnetic conductive bars are distributed evenly in~~

~~a circular area that is parallel to and opposite to the carrier surface, and the plurality of first magnetic conductive bars extend along a first direction parallel to the carrier surface; or~~

~~the magnetic conductive assembly includes a plurality of second magnetic conductive bars and a plurality of magnetic conductive rings, the plurality of second magnetic conductive bars are distributed in the circular area and extend different radial directions of the circular area, the plurality of second magnetic conductive bars are symmetrically distributed about a center of the circular area, the plurality of magnetic conductive rings are arranged in the circular area and overlap with the plurality of second magnetic conductive bars, centers of the plurality of magnetic conductive rings coincide with the center of the circular area, inner diameters of the plurality of magnetic conductive rings are different, and the plurality of magnetic conductive rings are arranged at a same interval along a radial direction of the circular area; or~~

~~the magnetic conductive assembly includes a magnetic conductive plate, the magnetic conductive plate is arranged parallelly to and oppositely to the carrier surface~~.

3. The process chamber according to claim 2, wherein the magnetic conductive structure includes a magnetic conductive assembly and a fixing ring, the magnetic conductive assembly is arranged in the fixing ring, and the fixing ring is configured to fix the magnetic conductive assembly in the base.~~a distance between any two neighboring first magnetic conductive bars of the first magnetic conductive bars is greater than or equal to 4 mm and smaller than or equal to 8 mm.~~

4. The process chamber according to claim ~~2~~3, wherein ~~a ratio of a diameter of the circular area to a diameter of the carrier surface is greater than or equal to two-thirds and smaller~~

than or equal to one.the magnetic conductive assembly includes a plurality of first magnetic conductive bars arranged evenly at intervals in the fixing ring and connected to the fixing ring; the plurality of first magnetic conductive bars extend along a second direction having a preset angle with the first direction; or

the magnetic conductive assembly includes a plurality of second magnetic conductive bars and a plurality of magnetic conductive rings, the plurality of second magnetic conductive bars extending along a radial direction of the fixing ring, connected to the fixing ring and arranged evenly along a circumference of the fixing ring; and the plurality of magnetic conductive rings are sequentially nested on the plurality of second magnetic conductive bars and arranged evenly at intervals; or

the magnetic conductive assembly includes a magnetic conductive plate arranged at an inner side of the fixing ring and having an outer edge connected to an inner edge of the fixing ring.

5. The process chamber according to claim 4, wherein a distance between any two neighboring first magnetic conductive bars of the plurality of first magnetic conductive bars is greater than or equal to 4 mm and smaller than or equal to 8 mm, and the preset angle is greater than or equal to 0° and smaller than or equal to 90°.

5. The process chamber according to claim 2, wherein the magnetic conductive structure further includes a fixing ring, an inner side of the fixing ring forms the circular area, and the fixing ring is connected to the magnetic conductive assembly and configured to fix the magnetic conductive assembly in the base.

~~6. The process chamber according to claim 2, wherein the magnet structure includes two groups of magnet groups and a fixing bracket, and the fixing bracket is configured to fix the two groups of magnet groups around the base; and~~

~~the two groups of magnet groups are arranged on two sides of the base along a radial direction of the carrier surface, each group of magnet groups includes a plurality of magnet columns, the plurality of magnet columns are arranged in an arc shape along a circumference of the carrier surface at intervals, N poles and S poles of all magnet columns of the two groups of magnet groups are arranged along a second direction at a same height, the second direction is parallel to a radial direction of the base and has a preset angle with the first direction, N poles of magnet columns of one group of magnet groups are close to the base, and S poles of magnet columns of the other group of magnet groups are close to the base.~~

~~7~~6. The process chamber according to claim ~~6~~5, wherein the preset angle is 90°.

~~8~~7. The process chamber according to claim ~~6~~2, wherein an outer ~~surface~~ side of a magnet column is covered with an anti-corrosion layer made of a soft magnetic material.

8. The process chamber according to any one of claims 1 to 7, wherein the magnetic conductive structure is a disc-shaped structure and a ratio of a diameter of the magnetic conductive structure to a diameter of the base is greater than or equal to two-thirds and smaller than or equal to one.

9. The process chamber according to ~~any one of claims 1 to 8~~claim 8, wherein a thickness of the magnetic conductive structure is greater than or equal to 2 mm and smaller than

or equal to 10 mm, and the preset distance is greater than or equal to 2 mm and smaller than or equal to 5 mm.

10. A semiconductor process apparatus comprising the process chamber of the semiconductor process apparatus of any one of claims 1 to 9.