WHAT IS CLAIMED IS:

1. A processing apparatus comprising:

a holding unit having a rotatable chuck table configured to hold a workpiece;

a processing unit configured to process the workpiece held on the chuck table;

a processing feed unit that carries out processing feed of the holding unit in an X-axis direction;

an indexing feed unit that carries out indexing feed of the processing unit in a Y-axis direction;

a camera that images the workpiece held on the chuck table and is movable in an indexing feed direction; and

a control unit configured to control the holding unit, the processing unit, the processing feed unit, the indexing feed unit, and the camera, wherein

the chuck table has a transparent member that forms a holding surface configured to hold the workpiece thereon,

the camera has, at positions which are up and down with the transparent member interposed therebetween, a first camera in a vicinity of the processing unit and a second camera that is more distant than the first camera from the processing unit,

the processing feed unit includes guide rails, and is configured to move the holding unit along the guide rails between

a processing zone, in which the workpiece is imaged by the first camera from above the chuck table and processed by the processing unit; and

an imaging zone, in which the workpiece is imaged by the second camera at a position that is apart from the processing zone by a predetermined distance in the X-axis direction, and

the control unit includes a correction amount calculation section configured such that, after forming a linear processed mark in the workpiece by the processing unit while carrying out processing feed of the chuck table, the processed mark is imaged by the first camera, the chuck table is moved to the imaging zone, the processed mark is imaged by the second camera, and correction values in the Y-axis direction or a correction angle for the chuck table are or is then calculated from Y-coordinates of two points that are apart from each other in a processing feed direction on the processed mark, whereby when carrying out processing feed of the chuck table in the imaging zone, the second camera is corrected in position in the Y-axis direction based on

the correction values or the chuck table is rotated by the correction angle.

2. The processing apparatus according to claim 1,

wherein the control unit further includes a coordinate storage section configured to store in terms of X and Y-coordinates a positional deviation between the first camera positioned to image a predetermined region on the workpiece held on the chuck table and the second camera positioned to image the predetermined region, and is configured to correct the position of the second camera based on the X and Y-coordinates stored in the coordinate storage section such that the second camera can image the predetermined region imaged by the first camera.

3. The processing apparatus according to claim 2, further comprising:

a display unit that displays a first image captured by the first camera and a second image captured by the second camera,

wherein the control unit further includes an image control section configured to display the first image and the second image in superposition or juxtaposition on the display unit with one of the first image and the second image being inverted in the processing feed direction.

4. A processing apparatus comprising:

a holding unit having a rotatable chuck table configured to hold a workpiece;

a processing unit configured to process the workpiece held on the chuck table;

a processing feed unit that carries out processing feed of the holding unit in an X-axis direction;

an indexing feed unit that carries out indexing feed of the processing unit in a Y-axis direction;

a camera that images the workpiece held on the chuck table and is movable in the Y-axis direction; and

a control unit configured to control the holding unit, the processing unit, the processing feed unit, the indexing feed unit, and the camera, wherein

the chuck table has a transparent member that forms a holding surface configured to hold the workpiece thereon,

the camera has, at positions which are up and down with the transparent member interposed therebetween, a first camera in a vicinity of the processing unit and a second camera that is more distant than the first camera from the processing unit,

the processing feed unit includes guide rails, and is configured to move the holding unit along the guide

rails between

a processing zone, in which the workpiece is imaged by the first camera from above the chuck table and processed by the processing unit; and

an imaging zone, in which the workpiece is imaged by the second camera at a position that is apart from the processing zone by a predetermined distance, and

the control unit includes a correction amount calculation section configured to image a linear mark in the workpiece or the chuck table by the first camera, to rotate the chuck table to adjust the mark to a direction parallel to the X-axis direction, to move the chuck table to the imaging zone to image the mark by the second camera, and then to calculate correction values in the Y-axis direction or a correction angle for the chuck table from X and Y-coordinates of two points that are apart from each other in the X-axis direction on the mark, whereby when carrying out processing feed of the chuck table in the imaging zone and carrying out imaging, the second camera is subjected to indexing feed based on the correction values or the chuck table is rotated by the correction angle.

5. The processing apparatus according to claim 4, wherein the control unit further includes a coordinate

storage section configured to store in terms of X and Y-coordinates a positional deviation between the first camera positioned to image a predetermined region on the workpiece held on the chuck table and the second camera positioned to image the predetermined region, and is configured to correct the position of the second camera based on the X and Y-coordinates stored in the coordinate storage section such that the second camera can image the predetermined region imaged by the first camera.

6. The processing apparatus according to claim 5, further comprising:

a display unit that displays a first image captured by the first camera and a second image captured by the second camera,

wherein the control unit further includes an image control section configured to display the first image and the second image in superposition or juxtaposition on the display unit with one of the first image and the second image being inverted in the X-axis direction.