WHAT IS CLAIMED IS:

1. A method of processing a plate-shaped workpiece having a first rectangular surface having four sides and a second rectangular surface positioned opposite the first surface, with use of a chuck table having a holding surface and of a processing unit for processing the workpiece held on the chuck table, the method comprising:

an acquiring step for, while the second surface of the workpiece is being held on the holding surface of the chuck table, acquiring an orientation of the four sides of the workpiece in an XY plane parallel to the holding surface and four sets of XY coordinates indicating positions of the four sides in the XY plane, from displacement information obtained by measuring a height of an area including the four sides of the workpiece; and

after the acquiring step, a processing step for processing the workpiece on a basis of the orientation of the sides and the four sets of XY coordinates, wherein

the acquiring step further includes

an orientation acquiring step for acquiring an orientation of one side of the workpiece from XY coordinates that indicate two positions where the side and two straight lines that extend through different positions in Y directions and that are parallel to X

directions, intersect with each other.

2. The method of processing a workpiece according to claim 1, wherein

the orientation acquiring step further includes

moving a measuring instrument for measuring a height and the chuck table relatively to each other to thereby measure a height of an area including the side of the workpiece on the two straight lines that extend through different positions in Y directions and that are parallel to X directions, and calculating the XY coordinates indicating the two positions where the side and the two straight lines intersect with each other, from obtained displacement information, to acquire the orientation of the side, to acquire an orientation of the side,

the acquiring step further includes

after the orientation acquiring step, a first coordinate acquiring step for adjusting an orientation of the chuck table about a rotational axis perpendicular to the XY plane in order to make the orientation of the side acquired in the orientation acquiring step parallel to the Y directions, then moving the measuring instrument and the chuck table relatively to each other to thereby measure a height of an area

including two opposite sides of the workpiece on a straight line parallel to the X directions, and acquiring two sets of XY coordinates indicating two positions where the two opposite sides and the straight line intersect with each other, from obtained displacement information,

after the first coordinate acquiring step, a second coordinate acquiring step for adjusting the orientation of the chuck table about the rotational axis in order to make the orientation of the side acquired in the orientation acquiring step perpendicular to the Y directions, then moving the measuring instrument and the chuck table relatively to each other to thereby measure a height of an area including other two opposite sides of the workpiece on a straight line parallel to the X directions, and acquiring two sets of XY coordinates indicating two positions where the other two opposite sides and the straight line intersect with each other, from obtained displacement information, and

after the second coordinate acquiring step, a corrected coordinate acquiring step for correcting

either the two sets of XY coordinates that are acquired in the first coordinate acquiring step and that indicate two positions where the two opposite sides and the straight line intersect with each other or

correcting the two sets of XY coordinates acquired in the second coordinate acquiring step and that indicate two positions where the other two opposite sides and the straight line intersect with each other, and acquiring corrected two sets of XY coordinates.

3. The method of processing a workpiece according to claim 1, wherein

the acquiring step further includes

a first coordinate acquiring step for moving a measuring instrument for measuring a height and the chuck table relatively to each other to thereby measure a height of an area including two opposite sides of the workpiece on two straight lines that extend through different positions in Y directions and that are parallel to X directions, and acquiring three or more sets of XY coordinates indicating three or more positions where the two opposite sides and the two straight lines intersect with each other, from obtained displacement information,

after the first coordinate acquiring step, a second coordinate acquiring step for, while an orientation of the chuck table about a rotational axis perpendicular to the XY plane is perpendicular to an orientation of the chuck table in the first coordinate

acquiring step, moving the measuring instrument and the chuck table relatively to each other to thereby measure a height of an area including other two opposite sides of the workpiece on a straight line parallel to the X directions, and acquiring two sets of XY coordinates indicating two positions where the other two opposite sides and the straight line intersect with each other, from obtained displacement information,

after the second coordinate acquiring step, the orientation acquiring step, wherein the orientation acquiring step further includes

acquiring the orientation of the one side of the workpiece, the one side selected from the two opposite sides, from the two sets of XY coordinates that are acquired in the first coordinate acquiring step and that indicate two positions where one of the two opposite sides and the two straight lines intersect with each other, and

after the orientation acquiring step, a corrected coordinate acquiring step for correcting two sets of XY coordinates selected from the three or more sets of XY coordinates that are acquired in the first coordinate acquiring step and that indicate two positions where the two opposite sides and one of the straight

lines intersect each other and correcting the two sets of XY coordinates acquired in the second coordinate acquiring step, on a basis of the orientation of the side acquired in the orientation acquiring step, and acquiring corrected four sets of XY coordinates.

4. The method of processing a workpiece according to claim 1, wherein

the acquiring step further includes

a first coordinate acquiring step for moving a measuring instrument for measuring a height and the chuck table relatively to each other to thereby measure a height of an area including two opposite sides of the workpiece on two straight lines that extend through different positions in Y directions and that are parallel to X directions, and acquiring three or more sets of XY coordinates indicating three or more positions where the two opposite sides and the two straight lines intersect with each other, from obtained displacement information,

after the first coordinate acquiring step, the orientation acquiring step, wherein the orientation acquiring step further includes

acquiring the orientation of the one side of the workpiece, the one side selected from the two opposite sides, from the two sets of XY coordinates that

are acquired in the first coordinate acquiring step and that indicate two positions where one of the two opposite sides and the two straight lines intersect with each other,

after the orientation acquiring step, a second coordinate acquiring step for, while an orientation of the chuck table about a rotational axis perpendicular to the XY plane is perpendicular to an orientation of the chuck table in the first coordinate acquiring step, moving the measuring instrument and the chuck table relatively to each other to thereby measure a height of an area including other two opposite sides of the workpiece on a straight line parallel to the X directions, and acquiring two sets of XY coordinates indicating two positions where the other two opposite sides and the straight line intersect with each other, from obtained displacement information, and

after the second coordinate acquiring step, a corrected coordinate acquiring step for correcting two sets of XY coordinates selected from the three or more sets of XY coordinates that are acquired in the first coordinate acquiring step and that indicate two positions where the two opposite sides and one of the straight lines intersect each other and correcting the two sets of

XY coordinates acquired in the second coordinate acquiring step, on a basis of the orientation of the side acquired in the orientation acquiring step, and acquiring corrected four sets of XY coordinates.

5. A method of processing a plate-shaped workpiece having a first rectangular surface having four sides and a second rectangular surface positioned opposite the first surface, with use of a chuck table having a holding surface and of a processing unit for processing the workpiece held on the chuck table, the method comprising:

an acquiring step for, while the second surface of the workpiece is being held on the holding surface of the chuck table, acquiring an orientation of a side of the workpiece in an XY plane parallel to the holding surface, from an image captured of an area including the side of the workpiece, and acquiring four sets of XY coordinates indicating positions of the four sides of the workpiece in the XY plane, from displacement information obtained by measuring a height of an area including the four sides of the workpiece; and

after the acquiring step, a processing step for processing the workpiece on a basis of the orientation of the side and the four sets of XY coordinates,

wherein the acquiring step further includes

an orientation acquiring step for acquiring the orientation of a side of the workpiece in an XY plane parallel to the holding surface, by calculating the XY coordinates of two positions on the side from the image captured of an area including the side of the workpiece,

after the orientation acquiring step, a first coordinate acquiring step for adjusting an orientation of the chuck table about a rotational axis perpendicular to the XY plane in order to make the orientation of the side acquired in the orientation acquiring step parallel to the Y directions, then moving the measuring instrument and the chuck table relatively to each other to thereby measure a height of an area including two opposite sides of the workpiece on a straight line parallel to the X directions, and acquiring two sets of XY coordinates indicating two positions where the two opposite sides and the straight line intersect with each other, from obtained displacement information,

after the first coordinate acquiring step, a second coordinate acquiring step for adjusting the orientation of the chuck table about the rotational axis in order to make the orientation of the side acquired in the orientation acquiring step perpendicular to the Y directions, then moving the measuring instrument and the

chuck table relatively to each other to thereby measure a height of an area including other two opposite sides of the workpiece on a straight line parallel to the X directions, and acquiring two sets of XY coordinates indicating two positions where the other two opposite sides and the straight line intersect with each other, from obtained displacement information, and

after the second coordinate acquiring step, a corrected coordinate acquiring step for correcting either the two sets of XY coordinates that are acquired in the first coordinate acquiring step and that indicate two positions where the two opposite sides and the straight line intersect with each other or correcting the two sets of XY coordinates acquired in the second coordinate acquiring step and that indicate two positions where the other two opposite sides and the straight line intersect with each other, and acquiring corrected two sets of XY coordinates.

6. The method of processing a workpiece according to any one of claims 1 to 5, wherein

the displacement information is measured by the measuring instrument comprising a non-optical displacement measuring instrument.

7. The method of processing a workpiece according to any one of claims 1 to 6, wherein the height of an area including any of the four sides of the workpiece is measured by moving the chuck table and the measuring instrument relatively to each other in the X directions.

8. The method of processing a workpiece according to any one of claims 1 to 6, wherein the height of an area including any of the four sides of the workpiece is measured by moving the chuck table and the measuring instrument relatively to each other in the Y directions.