[TITLE OF DOCUMENT] SPECIFICATION

[TITLE OF THE INVENTION] DOUBLE-~~END~~DISK SURFACE GRINDING METHOD AND ~~DOUBE~~DOUBLE DISK SURFACE GRINDER

[Technical Field]

[0001]

The present invention relates to a double-~~end~~disk surface grinding method and a double disk surface grinder.

[Background Art]

[0002]

When grinding both side surfaces of a thin disk-shaped workpiece such as a silicon wafer by a horizontal double disk surface grinder, in a state in which a workpiece is held by static pressure from the both sides in a board thickness direction by a pair of right and left static pressure pads, the both surfaces of the workpiece are ground to a predetermined thickness by a pair of right and left grinding wheels while rotating the workpiece by a carrier (Patent Document 1).

[0003]

In this type of horizontal double-~~end~~disk surface grinding, it is very important for the improvement of grinding precision that a workpiece is held at the middle position between the static pressure pads, to be ground. Then, conventionally,

adjusted to zero. Therefore, even when a workpiece is held by static pressure via static pressure water by the both static pressure pads, the workpiece is rotated so as to be inclined depending on a workpiece shape or a setup status, or the like, that is, it is difficult to stably rotate the workpiece at the middle position between the both static pressure pads, and the zeroed position may be largely deviated from the middle position between the both static pressure pads. Accordingly, in such a case, there are problems that it takes much time to restart grinding, and many workpieces are wasted by trial grinding.

[0010]

Moreover, in the latter horizontal double disk surface grinder using contact-type sizing equipment, it is possible to more securely calculate the middle position between the both static pressure pads. Meanwhile, there are problems that it takes time and effort for the calculation, an operator is required to be highly-skilled, and the like.

[0011]

The present invention was made in view of these conventional problems, and an object of the present invention is to provide a double-~~end~~disk surface grinding method and a double disk surface grinder which are capable of easily and securely aligning a grinding position of a thin

disk-shaped workpiece at a middle position between the both static pressure pads, and of grinding with predetermined grinding precision from an initial product immediately after the setup.

[Means for Solving the Problem]

[0012]

A double-~~end~~disk surface grinding method according to the present invention includes, when grinding both surfaces of the workpiece by a pair of grinding wheels while rotating a thin disk-shaped workpiece supported by static pressure by a pair of static pressure pads, detecting a position of the workpiece by workpiece position detecting means while moving the workpiece toward a center side between the both static pressure pads at static pressure supporting positions by the grinding wheels, tentatively determining positions of the grinding wheels when the workpiece position detecting means detects that the workpiece is separated by a predetermined distance from the respective static pressure pads, as grinding advancing end positions, and advancing the both grinding wheels at the same speed from the grinding advancing end positions, to grind the workpiece.

[0013]

It is preferable that an operation in which, after the