[TITLE OF DOCUMENT] WHAT IS CLAIMED IS:

[Claim 1]

A double disk ~~double-end~~ surface grinding method comprising, when grinding both surfaces of ~~the~~ a thin disk-shaped workpiece by a pair of grinding wheels while rotating ~~a~~ the thin disk-shaped workpiece supported by static pressure by a pair of static pressure pads:

detecting a position of the thin disk-shaped workpiece by workpiece position detecting means while moving the thin disk-shaped workpiece on a side of one of the static pressure pads at static pressure supporting positions toward an advancing direction by one of the grinding wheels on the side of the one of the static pressure pads ~~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 on the side of the one of the static pressure pads when the workpiece position detecting means detects that the thin disk-shaped workpiece is separated by a predetermined distance from the one of ~~respective~~ static pressure pads, as grinding advancing end position~~s~~ of the grinding wheel on the side of the one of the static pressure pads, and

advancing ~~the both~~ each of grinding wheels at the same speed from the grinding advancing end positions, to grind the thin disk-shaped workpiece after the tentative determination for each of the grinding wheels is made and the grinding advancing

end positions of each of the grinding wheels are tentatively determined.

[Claim 2]

The double disk ~~double-end~~ surface grinding method according to Claim 1, wherein an operation in which, after the thin disk-shaped workpiece is pressed against one of the static pressure pads at the static pressure supporting positions, the thin disk-shaped workpiece is levitated by a predetermined amount from the one static pressure pad by the grinding wheel whose rotation is stopped while advancing the grinding wheel on the one static pressure pad side, and a position of the grinding wheel when the thin disk-shaped workpiece is levitated by the predetermined amount is tentatively determined as the grinding advancing end position is carried out on each side, and thereafter, the thin disk-shaped workpiece is supported by static pressure by the both static pressure pads.

[Claim 3]

The double disk ~~double-end~~ surface grinding method according to Claim 2, wherein a static pressure fluid is supplied from the other static pressure pad, to press the thin disk-shaped workpiece against the side of the one of the static pressure pads ~~side~~.

[Claim 4]

The double disk ~~double-end~~ surface grinding method according to any of Claims 1 to 3, wherein an offset amount of the both grinding wheels is determined in advance, and the

both grinding wheels are set so as not to advance by the offset amount during grinding of the thin disk-shaped workpiece.

[Claim 5]

A double disk surface grinder which grinds both surfaces of ~~the~~ a thin disk-shaped workpiece by a pair of grinding wheels while rotating ~~a~~ the thin disk-shaped workpiece supported by static pressure by a pair of static pressure pads, the double disk surface grinder comprising:

a pair of workpiece position detecting means for detecting a position at which the thin disk-shaped workpiece is separated by a predetermined distance from the both static pressure pads at static pressure supporting positions;

grinding advancing end position tentatively-determining means for tentatively determining positions of the grinding wheels when the respective workpiece position detecting means detect the position separated by the predetermined distance, as grinding advancing end positions; and

grinding cycle control means for advancing the both grinding wheels at the same speed from the grinding advancing end positions tentatively determined by the grinding advancing end position tentatively-determining means, to execute a grinding cycle.