[TITLE OF DOCUMENT] WHAT IS CLAIMED IS:

[Claim 1]

A workpiece carrying-in-and-out method in double-end surface grinding for grinding both surfaces of the workpiece by a pair of grinding wheels while rotating a thin disk-shaped workpiece which is held by static pressure by a pair of static pressure pads, by a carrier,

the workpiece carrying-in-and-out method comprises ~~wherein,~~ a process in which at the time of sucking the workpiece by carrying-in-and-out means, to carry the workpiece into and out from the carrier between the both static pressure pads, the workpiece in the carrier is sucked by one of the static pressure pads at an advanced holding position,

a process in which after the workpiece in the carrier is sandwiched by the carrying-in-and-out means and the one static pressure pad, and in that state, the workpiece is delivered between the carrying-in-and-out means and the static pressure pad.

~~[Claim 2]~~

~~The workpiece carrying-in-and-out method in double-end surface grinding according to Claim 1, wherein after the workpiece in the carrier is sandwiched by the carrying-in-and-out means and the one static pressure pad, in that state, the workpiece is delivered between the carrying-in-and-out means and the static pressure pad.~~

[Claim 2 ~~3~~]

The workpiece carrying-in-and-out method in double-end surface grinding according to Claim 1, wherein, after the workpiece sucked by the carrying-in-and-out means is inserted into the carrier, to be sandwiched by the carrying-in-and-out means and the one static pressure pad, the suction of the workpiece by the carrying-in-and-out means is released at substantially the same time of suction of the workpiece by the one static pressure pad, or around the time of suction of the workpiece by the one static pressure pad.

[Claim 3 ~~4~~]

The workpiece carrying-in-and-out method in double-end surface grinding to according Claim 2 ~~3~~, wherein, after the other static pressure pad is advanced to the advanced holding position, the suction of the workpiece by the one static pressure pad is released, and a static pressure fluid is supplied to the respective static pressure pads, to hold the workpiece by static pressure.

[Claim 4 ~~5~~]

The workpiece carrying-in-and-out method in double-end surface grinding according to Claim 1 to 3 ~~4~~, wherein, after the holding of the workpiece by static pressure by the both static pressure pads at the advanced holding position is released, and the workpiece in the carrier is sucked by the one static pressure pad, the other static pressure pad is withdrawn from the advanced holding position.

[Claim 5 ~~6~~]

The workpiece carrying-in-and-out method in double-end surface grinding according to Claim 3 ~~4~~, wherein a static pressure fluid is supplied from the other static pressure pad, to release the surface tension between the other static pressure pad and the workpiece at substantially the same time of suction of the workpiece by the one static pressure pad, or around the time of suction of the workpiece by the one static pressure pad.

[Claim 6 ~~7~~]

The workpiece carrying-in-and-out method in double-end surface grinding according to Claim 5 ~~6~~, wherein, after the workpiece in the carrier is sandwiched by the carrying-in-and-out means and the one static pressure pad, the suction of the workpiece by the one static pressure pad is released at substantially the same time of suction of the workpiece by the one static pressure pad, or around the time of suction of the workpiece by the carrying-in-and-out method, and a static pressure fluid is supplied from the one static pressure pad, to separate the workpiece from the one static pressure pad.

[Claim 7 ~~8~~]

A double disk surface grinder comprising:

a carrier that rotates a thin sheet-like workpiece;

a pair of static pressure pads which hold the workpiece in the carrier by static pressure;

a pair of grinding wheels that grind both surfaces of the workpiece which is held by static pressure by the static

pressure pads, and is rotated by the carrier; and

carrying-in-and-out means for sucking the workpiece to carry the workpiece into and out from between the pair of static pressure pads, the double-end surface grinder wherein

one of the static pressure pads includes suction holes for sucking the workpiece in the carrier at a plurality of places in a circumferential direction including a vicinity of an engaging protrusion that engages a notch section of the workpiece.