WHAT IS CLAIMED IS:

1. A waste liquid treating device comprising a water tank and an adhesion plate, wherein a waste liquid that contains swarf, the waste liquid being discharged when a workpiece is ground by use of a processing liquid and abrasive grains, is stored in the water tank, the adhesion plate is immersed in the waste liquid stored in the water tank, and the adhesion plate with the swarf adhered thereto is taken out of the water tank to thereby remove the swarf from the waste liquid, the waste liquid treating device further comprising:

a holding section that holds the adhesion plate;

a vertically moving mechanism that moves the holding section vertically; and

a peeling mechanism that peels the water-containing swarf from the adhesion plate held by the holding section,

wherein the peeling mechanism includes

two air nozzles extending in parallel to each other in a horizontal direction with a spacing therebetween and having jet ports formed to face each other,

a valve disposed in a piping providing communication between the two air nozzles and an air

source, and

a control unit that performs control of opening and closing of the valve and control of the vertically moving mechanism that moves the adhesion plate in a vertical direction in the spacing between the two air nozzles, and

the valve is opened when the adhesion plate is raised after the adhesion plate held by the holding section is made to enter the spacing between the parallel two air nozzles, and the swarf adhered to the adhesion plate is peeled off on a non-contact basis by air pressure of air jetted from the jet ports to one surface and another surface of the adhesion plate.

2. A swarf powder recovery device that recovers swarf powder obtained by drying the water-containing swarf peeled off from the adhesion plate of the waste liquid treating device in which a waste liquid that contains swarf, the waste liquid being discharged when a workpiece is ground by use of a processing liquid and abrasive grains, is stored in a water tank, an adhesion plate is immersed in the waste liquid stored in the water tank, and the adhesion plate with the swarf adhered thereto is taken out of the water tank to thereby remove the swarf from the waste liquid, the waste liquid

treating device including

a holding section that holds the adhesion plate,

a vertically moving mechanism that moves the holding section vertically, and

a peeling mechanism that peels the water-containing swarf from the adhesion plate held by the holding section,

the peeling mechanism including

two air nozzles extending in parallel to each other in a horizontal direction with a spacing therebetween and having jet ports formed to face each other,

a valve disposed in a piping providing communication between the two air nozzles and an air source, and

a control unit that performs control of opening and closing of the valve and control of the vertically moving mechanism that moves the adhesion plate in a vertical direction in the spacing between the two air nozzles, and

the valve being opened when the adhesion plate is raised after the adhesion plate held by the holding section is made to enter the spacing between the parallel two air nozzles, and the swarf adhered to the adhesion

plate being peeled off on a non-contact basis by air pressure of air jetted from the jet ports to one surface and another surface of the adhesion plate, the swarf powder recovery device comprising:

a drying mechanism that dries the swarf peeled off from the adhesion plate by the peeling mechanism,

wherein the drying mechanism includes

a conveying belt on which the swarf peeled off by the peeling mechanism is mounted and which moves the swarf in a horizontal direction,

a recovery box that recovers the swarf powder conveyed by the conveying belt, and

a drying chamber covering an upper portion of the conveying belt and extending in an extending direction of the conveying belt,

the drying chamber includes

a charging port which is disposed on one end side of the conveying belt and through which to charge the swarf, and

an exhaust port disposed on another end side of the conveying belt for exhausting air jetted from the air nozzles of the peeling mechanism and charged into the drying chamber together with the swarf through the charging port, and

air jetted by the air nozzles flows in the drying chamber in a direction from the charging port toward the exhaust port, to thereby dry the swarf mounted on the conveying belt and containing water, thereby recovering the swarf powder.