WHAT IS CLAIMED IS:

1. A processing apparatus comprising:

a chuck table for holding a plate-like workpiece under suction;

suction means connected to said chuck table, for causing said chuck table to generate a suction force; and

processing means for processing the plate-like workpiece held by said chuck table while supplying processing water to the plate-like workpiece; wherein

said suction means includes:

a first suction source;

a first pipe providing fluid communication between said first suction source and said chuck table;

a separator arranged halfway in said first pipe, for separating a gas and a liquid drawn in from said chuck table; and

water discharging means for discharging the liquid separated by said separator;

said water discharging means includes:

a second suction source;

a second pipe providing fluid communication between said second suction source and a water discharge port of said separator;

a trapped liquid level sensor for detecting the amount of liquid trapped in said separator;

a pressure sensor for detecting the pressure in said first pipe;

a decision unit configured to determine whether the amount of liquid detected by said trapped liquid level sensor has exceeded a predetermined amount or not and to determine whether the pressure detected by said pressure sensor is lower than a predetermined value or not; and

a switching controller for operating said second suction source if said decision unit decides that the amount of liquid detected by said trapped liquid level sensor has exceeded the predetermined amount, and shutting down said second suction source if said decision unit decides that the pressure detected by said pressure sensor is lower than the predetermined value, the processing apparatus further having

a check valve arranged in said second pipe, for preventing a fluid from flowing from said second suction source to said separator.

2. The processing apparatus according to claim 1, wherein each of said first suction source and said second suction source comprises an air supply source and an ejector for drawing in a fluid under a negative pressure generated by a flow of air supplied from said air supply source.