

ABSTRACT

An electroplating solution backflow control system, comprising: a process chamber, a liquid storage tank, a control device, an overflow pipeline, a backflow pipeline, and a bubble detection device and a backflow control valve arranged on the backflow pipeline; wherein the process chamber includes a reaction tank and an overflow tank; an overflow port is arranged at a predetermined height on the side wall of the overflow tank, and the overflow pipeline is used for connecting the overflow port to the liquid storage tank; the overflow tank is provided with a backflow port, and the bubble detection device is arranged between the backflow port and the backflow control valve, for detecting whether bubbles are present in the electroplating solution flowing through the bubble detection device in the backflow pipeline; the control device is used for adjusting the opening of the backflow control valve according to the detection result of the bubble detection device and the flow rate of the electroplating solution in the overflow pipeline, so as to adjust the flow rate in the backflow pipeline. The electroplating solution backflow control system is capable of reducing or even eliminating bubbles generated during the backflow of the electroplating solution from an electroplating process chamber to the liquid storage tank, improving the stability of the electroplating solution, and thereby enhancing the efficiency and stability of the electroplating process.