

ABSTRACT

The present disclosure provides a flow equalization assembly, a gas inlet apparatus, and semiconductor process equipment. The flow equalization assembly internally has a flow equalization cavity, a plurality of gas inlet ports penetrating through a top wall along a thickness direction of the top wall are provided at the top wall of the flow equalization cavity, and a plurality of gas outlet ports penetrating through a bottom wall along a thickness direction of the bottom wall are provided at the bottom wall of the flow equalization cavity. A plurality of gas inlet pipes arranged in one-to-one correspondence with the plurality of gas inlet ports and a plurality of gas outlet pipes arranged in one-to-one correspondence with the plurality of gas outlet ports are arranged inside the flow equalization cavity. A first end of each gas inlet pipe is connected to the corresponding gas inlet port, and a second end of the gas inlet pipe is in communication with the flow equalization cavity. A first end of each gas outlet pipe is connected to the corresponding gas outlet port, and a second end of the gas outlet pipe is in communication with the flow equalization cavity. The second end of the gas inlet pipe is located below the second end of the gas outlet pipe. By adopting the present disclosure, process gas changes a flow direction during passage through the flow equalization assembly, thereby helping ensure that gas spray amounts of the respective gas outlet ports are the same, improving distribution uniformity of the process gas, and accordingly improving process uniformity and product yield.