

SYSTEM FOR AND METHOD OF FAST PULSE GAS DELIVERY

Abstract

A system for delivering pulses of a desired mass of gas to a tool, comprising: a mass flow controller including flow sensor, a control valve and a dedicated controller configured and arranged to receive a recipe of a sequence of steps for opening and closing the control valve so as to deliver as sequence of gas pulses as a function of the recipe. The mass flow controller is configured and arranged so as to operate in either one of at least two modes: as a traditional mass flow controller (MFC) mode or in a pulse gas delivery (PGD) mode. Further, the dedicated controller is configured and arranged to delivery pulses of gas in accordance with anyone of three different types of pulse gas delivery processes: a time based pulse delivery process, a mole based pulse delivery process and a profile based pulse delivery process.

FIG. 1