

FEEDBACK AND FEEDFORWARD CONTROL OF A SEMICONDUCTOR PROCESS
WITHOUT OUTPUT VALUES FROM UPSTREAM PROCESSES

ABSTRACT

The present invention discloses a feedback and feedforward process control system, comprising the steps:

- 1.) Determining an output variable that is highly correlated with the controlled variable, the variation of which is mainly influenced by upstream processes rather than current process,
- 2.) Processing a semiconductor wafer with a first set of parameters,
- 3.) Measuring the output variable that is highly correlated with the controlled variable after the semiconductor wafer is processed,
- 4.) Developing a predictive feedforward signal based on the output variable,
- 5.) Measuring the controlled variable after the semiconductor wafer is processed to be used as feedback signal, and
- 6.) Determining a second set of parameters based on feedback and feedforward signals.

FIG. 2