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(54) **AUTOMATED MECHANICAL HANDLING SYSTEMS FOR INTEGRATED CIRCUIT FABRICATION, SYSTEM COMPUTERS PROGRAMMED FOR USE THEREIN, AND METHODS OF HANDLING A WAFER CARRIER HAVING AN INLET PORT AND AN OUTLET PORT**

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See application file for complete search history.

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(57) **ABSTRACT**

Automated mechanical handling systems (AMHS) for integrated circuit fabrication, system computers programmed for use in the AMHSs, and methods of handling a wafer carrier having an inlet port and an outlet port are provided. An exemplary method of handling the wafer carrier includes providing a plurality of carrier storage positions that are adapted to receive the wafer carrier. The carrier storage positions include a presence sensor and a gas nozzle. The wafer carrier is loaded into one of the carrier storage positions. The presence of the wafer carrier in the carrier storage position is sensed with the presence sensor. A malfunction in gas flow through the inlet port is identified in the carrier storage position that contains the wafer carrier. The wafer carrier is relocated to another carrier storage position in response to identifying the malfunction.

20 Claims, 2 Drawing Sheets

