

Title (en)

SEMICONDUCTOR PROCESSING APPARATUS HAVING LINEAR CONVEYOR SYSTEM

Title (de)

HALBLEITERBEHANDLUNGSVORRICHTUNG MIT EINEM LINEAREN FÖRDERSYSTEM

Title (fr)

APPAREIL DE TRAITEMENT DE SEMI-CONDUCTEUR POURVU D'UN SYSTEME DE TRANSPORT LINEAIRE

Publication

EP 1027730 A1 20000816 (EN)

Application

EP 98903371 A 19980106

Priority

- US 9800132 W 19980106
- US 94052497 A 19970930
- US 99010797 A 19971215

Abstract (en)

[origin: WO9917356A1] A transport system for manipulating a semiconductor wafer in a processing tool (10) is set forth. The system includes a transport unit guide (66) disposed within the processing tool (10) for supporting a wafer transfer unit (61) as the unit moves between a first position and a second position. The transport unit guide (66) comprises a frame (65), a lateral guide rail (63) mounted on the frame (65), and a series of magnetic segments (71, 74) arranged upon the transport unit guide (66) proximate the lateral guide rail (63). The wafer transfer unit (62) includes a tram (84) translatably attached to the lateral guide rail (63) and a wafer transfer arm assembly (86) for manipulating the semiconductor wafer. An electromagnet is mounted on the tram (84) in cooperative relation with the magnetic segments (71, 74) for moving the transfer unit (62) along the guide rail (63). Actuators are used for controlling the position of the transfer unit (62) and transfer arm assembly (86), and sensors (91) are used for determining the position of the transfer unit (62) and transfer arm assembly (86). A controller (101) is disposed remote of the wafer transfer unit (62) and directs the movement of the transfer unit (62) and transfer arm assembly (86) in response to the sensors (91) using the actuators. A communication link is established between the actuators, sensors and controller (101). Preferably, the communication link is a fiber optic link.

IPC 1-7

H01L 21/68; **B65G 1/00**; **B65G 35/00**; **B65G 37/00**; **B65G 41/00**; **B65G 43/00**; **B65G 49/07**

IPC 8 full level

B65G 1/00 (2006.01); **B65G 37/00** (2006.01); **B65G 49/07** (2006.01); **H01L 21/00** (2006.01); **H01L 21/677** (2006.01)

CPC (source: EP)

H01L 21/67259 (2013.01); **H01L 21/67742** (2013.01); **H01L 21/67769** (2013.01); **H01L 21/67781** (2013.01)

Citation (search report)

See references of WO 9917356A1

Designated contracting state (EPC)

AT CH DE FR GB LI NL

DOCDB simple family (publication)

WO 9917356 A1 19990408; AU 6016498 A 19990423; CN 1129175 C 20031126; CN 1272960 A 20001108; EP 1027730 A1 20000816; JP 2001518710 A 20011016

DOCDB simple family (application)

US 9800132 W 19980106; AU 6016498 A 19980106; CN 98809734 A 19980106; EP 98903371 A 19980106; JP 2000514323 A 19980106