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(54) Title: ROBOTS FOR MICROELECTRONIC WORKPIECE HANDLING

(57) Abstract

An improved conveyor system (20) for transporting a microelectronic workpiece (w) within a processing tool (14, 16) is set forth. The conveyor system (20) includes a transport unit (30, 32) slidably guided on a conveyor rail (26) for transporting and manipulating the workpiece (w). The transport unit (30, 32) includes a vertical member (220) which is connected to a base end of a two section robot arm (100). The robot arm (100) includes an end effector (108) at a distal end thereof which is actuated to grip a surrounding edge of a workpiece (w). A first rotary actuator (200) is arranged to rotate the vertical member (220) about its axis to rotate the entire robot arm (100). A second rotary actuator (240) is positioned to rotate the second section (114) of the robot arm (100), via a belt, with respect to the first section (110) of the robot arm (100). A third rotary actuator (302) is arranged to rotate the end effector (108) about its horizontal axis. The third rotary actuator (302) permits the end effector (108) to flip the microelectronic workpiece (w) between a face up and a face down orientation.

