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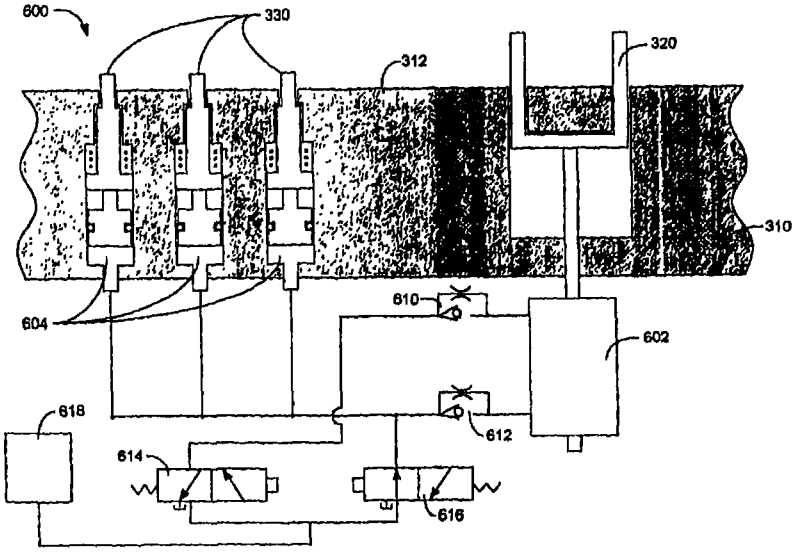


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(54) Title: PERIMETER WAFER LIFTING



(57) Abstract

The invention relates to an apparatus for lifting a substrate form a surface of a chuck subsequent to a processing step. The apparatus includes a perimeter pin for lifting the substrate from the surface of the chuck to a first position wherein the substrate is disposed on the perimeter pin during lifting. The perimeter pin is configured to overcome a holding force at an interface of the substrate and the surface. Generally, the holding force is generated between the substrate and the surface during the processing step. The apparatus further includes a center pin for moving the substrate from the first position to a second position wherein the substrate is disposed on the center pin during moving. The second position is further away from the surface of the chuck than the first position.