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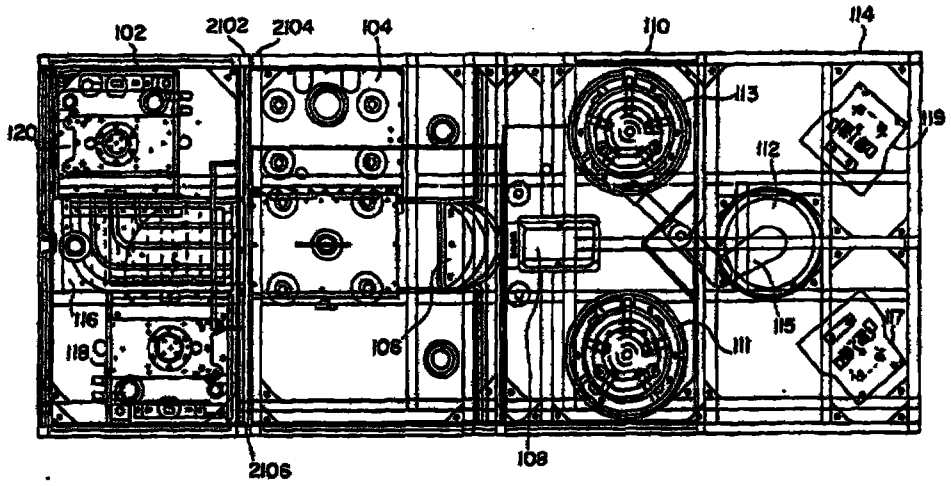
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(54) Title: METHODS AND APPARATUS FOR CLEANING, RINSING, AND DRYING WAFERS



(57) Abstract

The present invention relates to a wafer cleaning machine having an input station, a water track, a cleaning station, a rinsing station, a spin-dry station, and a load station. The input station includes two or more wafer supply areas for a continuous supply of wafers to the water track. After the wafers enter the water track from the input station, the wafers are transported down the track into the wafer cleaning station. The wafer cleaning station comprises a plurality of pairs of rollers which pull the wafers through the cleaning station and thereby clean the top and bottom flat surfaces of the wafers. A cleaning fluid manifold formed within the upper panel of the cleaning station facilitates effective distribution of the cleaning fluid to the rollers. From the cleaning station, the wafers are transported to a rinse station. From the rinsing station, the workpieces are transferred to a dual spin-dry station. At the spin-dry station, the workpieces are spun at a high speed to remove any residual water droplets or the like. From the dual spin-dry station, a robotic transfer arm removes the workpieces from the spin-dry station and places them in one o f a pair of unload cassettes. After the cassettes are filled with wafers, they are removed and transferred for subsequent processing.