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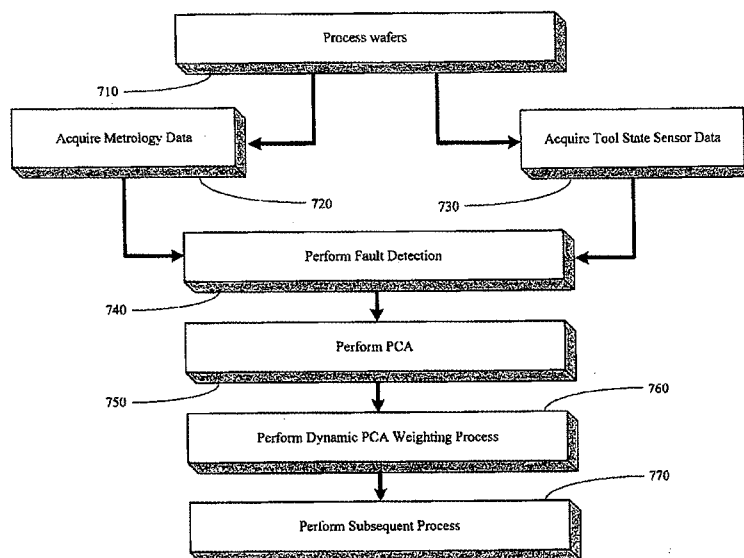
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(54) Title: **FAULT DETECTION SYSTEM AND METHOD BASED ON WEIGHTED PRINCIPAL COMPONENT ANALYSIS**



(57) Abstract: A method and a system for performing a dynamic weighting technique for performing fault detection. The method comprises processing a workpiece (105) and performing a fault detection analysis relating to the processing of the workpiece (105). The method further comprises determining a relationship of a parameter relating to the fault detection analysis to a detected fault and adjusting a weighting associated with the parameter based upon the relationship of the parameter to the detected fault.

WO 2006/049839 A1