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(54) **Title:** NOISE DIAGNOSTICS FOR AN ELECTRON BEAM INSPECTION SYSTEM WITH SWATHING

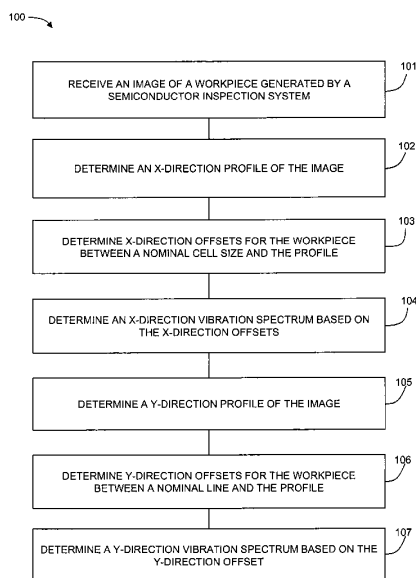


FIG. 1

(57) **Abstract:** Parameters from an inspection image representing mechanical vibrations and electromagnetic interference can be determined. An X-direction vibration spectrum can be determined based on the X-direction offsets. A Y-direction vibration spectrum can be determined based on the Y-direction offsets. The determinations can be based on a swath image of a workpiece, such as a semiconductor wafer or reticle.