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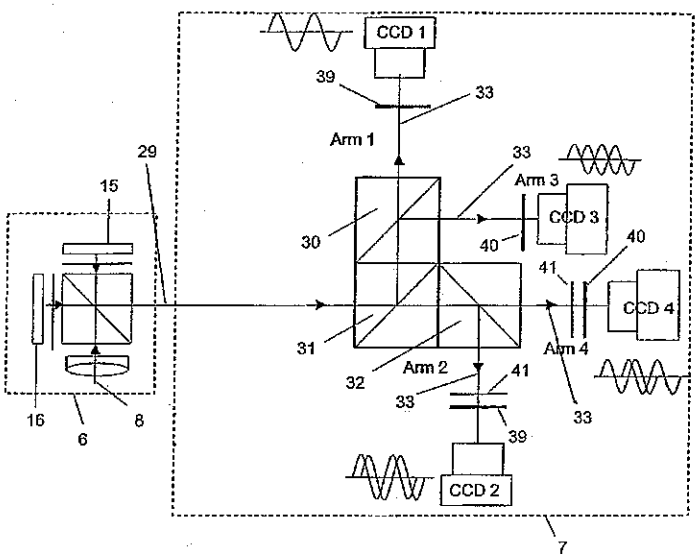
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(54) Title: SYSTEM AND METHOD FOR INSPECTION OF SILICON WAFERS



(57) Abstract: A method and system for inspecting silicon wafers for evaluating and detecting surface and sub-surface defects in silicon wafers before wafer fabrication and/or wafer reclamation processes. The system further provides for surface quality inspection of surface roughness, flatness, and total thickness variation of processed silicon wafers. The inspection system includes the techniques of combined optical interferometry and phase shifting interferometry. An optical head comprised of all the necessary sensors and optics, controllers for various devices and stages, is interfaced to a computer for performing measurements on silicon wafer to generate a display of results both qualitatively and quantitatively by utilizing real-time phase shifting, advanced signal processing, and image processing techniques.

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