Title (en)

INTERFEROMETRIC DEFECT DETECTION AND CLASSIFICATION

Title (de)

INTERFEROMETRISCHE DEFEKTDETEKTION UND KLASSIFIKATION

Title (fr)

DÉTECTION ET CLASSIFICATION PAR INTERFÉROMÉTRIE DE DÉFAUTS

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Application

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Abstract (en)

[origin: WO2009149103A1] Systems and methods for using common-path interferometric imaging for defect detection and classification are described. An illumination source generates and directs coherent light toward the sample. An optical imaging system collects light reflected or transmitted from the sample including a scattered component and a specular component that is predominantly undiffracted by the sample. A variable phase controlling system is used to adjust the relative phase of the scattered component and the specular component so as to change the way they interfere at the image plane. The resultant signal is compared to a reference signal for the same location on the sample and a difference above threshold is considered to be a defect. The process is repeated multiple times each with a different relative phase shift and each defect location and the difference signals are stored in memory. This data is used to calculate an amplitude and phase for each defect.

IPC 8 full level

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