

Title (en)
METHOD AND APPARATUS FOR NEAR-FIELD IMAGING

Title (de)
VERFAHREN UND VORRICHTUNG FÜR NAHFELDABBILDUNG

Title (fr)
PROCÉDÉ ET APPAREIL D'IMAGERIE EN CHAMP PROCHE

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Application
EP 08775449 A 20080616

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Abstract (en)
[origin: WO2008152190A1] The invention deals with the problem of identifying small particles or small irregularities in a material. In general, the resolution characteristics of an imaging device could be significantly improved if the device could sense or capture the evanescent part of the spectrum of the incoming wave. It is known that the amplitude of an evanescent wave is attenuated exponentially as a function of the distance from the source. The main principle of operation of the proposed device is to identify and sense these evanescent waves, enhance their amplitude, measure the enhanced field with the invented device in a certain frequency bandwidth and by using a postprocessing algorithm, reconstruct the near-field image of the object. In order to simplify the device and the measurement procedure, a method has been developed that uses only a small number of stationary probes. From the measured results, the original field distribution of the imaged object can be obtained by using a post-processing algorithm.

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