

[54] METHOD AND SYSTEM FOR DUAL PHASE SCANNING ACOUSTIC MICROSCOPY

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 73/620, 629; 358/112; 367/110

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[57] ABSTRACT

In a scanning acoustic microscope of the reflection type, in which an object is insonified with a series of ultrasonic acoustic pulses in accordance with a preselected scanning pattern and reflected acoustic echo pulses are received and employed to generate an initial electrical signal comprising a sequence of electrical pulses having amplitudes and polarities representative of the magnitudes and phases of the echoes, a directly readable unified interpretative display image is produced from the entire electrical signal; that image includes the usual scanning position and depth information determined by timing of the electrical pulses, together with complete transition information regarding the nature of acoustic impedance changes, based on both the amplitudes and the polarities of those pulses. A compared dual integration method and system, with related gating and display enhancement techniques, comprises the preferred embodiment.

28 Claims, 2 Drawing Sheets

