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(54) **FREQUENCY DOMAIN PROCESSING OF SCANNING ACOUSTIC IMAGING SIGNALS**

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(58) **Field of Classification Search** 600/443, 600/437, 445; 73/105, 588, 597, 599, 602, 73/606, 619, 620

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See application file for complete search history.

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 768 days.

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This patent is subject to a terminal disclaimer.

(57) **ABSTRACT**
Method and apparatus useful in the inspection of a target comprises scanning the target with a pulsed acoustic beam, sensing the pulsed beam after it has been modified by interaction with the target, producing a time-domain signal indicative of the modifications, processing the time-domain signal to produce a frequency domain representation of the modifications, and producing an image-wise display of the frequency domain representation of the modifications. In one execution disclosed, the frequency domain representation is altered and then reconverted to a time domain signal before display.

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77 Claims, 3 Drawing Sheets

