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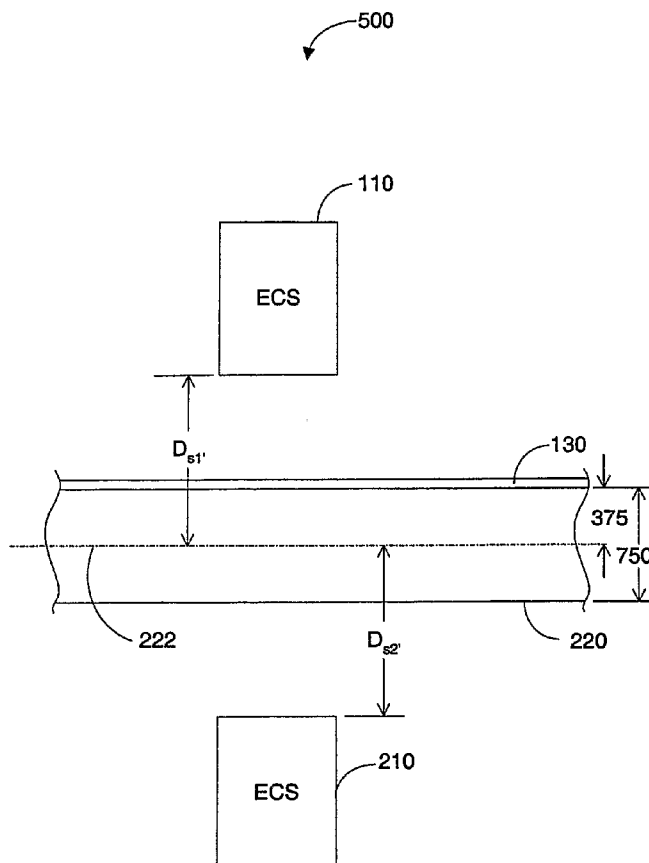
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(54) Title: SYSTEM, METHOD AND APPARATUS FOR THIN-FILM SUBSTRATE SIGNAL SEPARATION USING EDDY CURRENT



(57) Abstract: A system and method for determining a component of an eddy current sensor (ECS) signal attributable to a substrate includes placing a substrate in a first position relative to an ECS at a first distance from the ECS. The substrate can include a conductive film on a first surface of the substrate. A first ECS signal can be detected with the substrate in the first position. The substrate can then be inverted relative to the ECS such that the substrate is in a second position relative to the ECS at a second distance from the ECS. The second distance is equal to the first distance less about a thickness of the substrate. A second ECS signal is detected with the substrate in the second position. A difference signal is determined. The difference signal is equal to a difference between a first signal level on a calibration graph for the ECS and the second signal level. The second signal level being shifted a distance about equal to the thickness of the substrate. A first substrate component of the first ECS signal is calculated. The first substrate component of the first ECS signal is equal to a product of the first distance and the difference signal, divided by the thickness of the substrate.

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