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(54) **METHOD AND SYSTEM FOR AUTOMATED ON-CHIP MATERIAL AND STRUCTURAL CERTIFICATION OF MEMS DEVICES**

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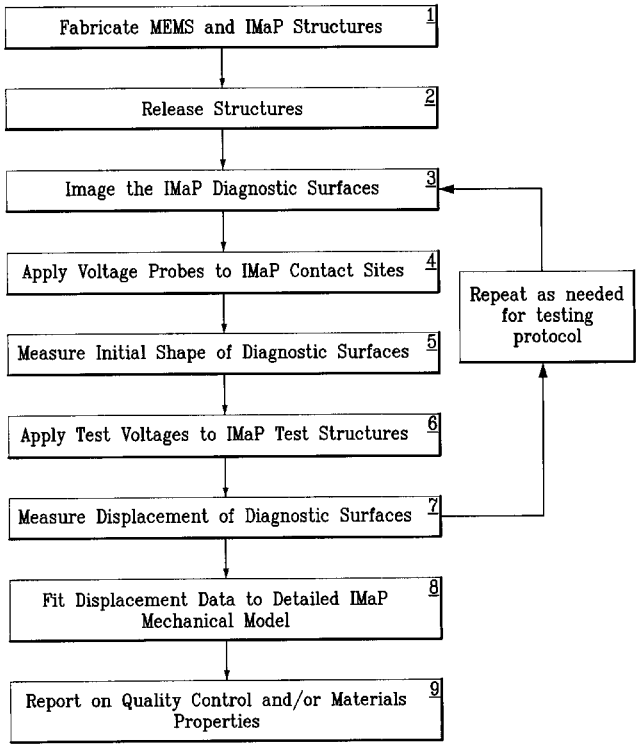
(57) **ABSTRACT**

A new approach toward MEMS quality control and materials characterization is provided by a combined test structure measurement and mechanical response modeling approach. Simple test structures are cofabricated with the MEMS devices being produced. These test structures are designed to isolate certain types of physical response, so that measurement of their behavior under applied stress can be easily interpreted as quality control and material properties information.

36 Claims, 10 Drawing Sheets