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**GUO, Shifeng**; c/o Institute of Materials Research and Engineering, 2 Fusionopolis Way, #08-03, Innovis, Singapore 138634 (SG).

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(74) **Agent: SPRUSON & FERGUSON (ASIA) PTE LTD**;  
P.O. Box 1531, Robinson Road Post Office, Singapore 903031 (SG).

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(71) **Applicant: AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH** [SG/SG]; 1 Fusionopolis Way, #20-10 Connexis North, Singapore 138632 (SG).

(72) **Inventors: ZHANG, Lei**; c/o Institute of Materials Research and Engineering, 2 Fusionopolis Way, #08-03, Innovis, Singapore 138634 (SG). **YAO, Kui**; c/o Institute of Materials Research and Engineering, 2 Fusionopolis Way, #08-03, Innovis, Singapore 138634 (SG). **CHEN, Shuting**; c/o Institute of Materials Research and Engineering, 2 Fusionopolis Way, #08-03, Innovis, Singapore 138634 (SG).

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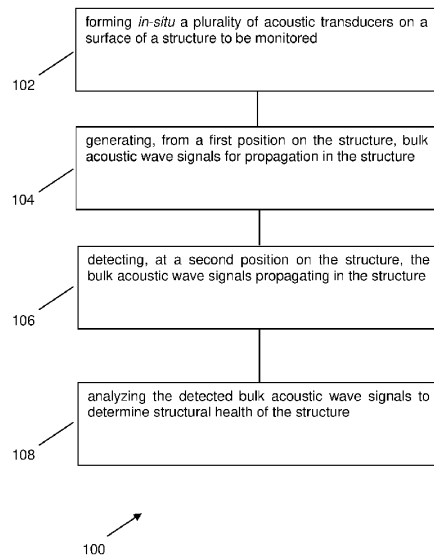


Figure 1

(57) **Abstract:** A structural health monitoring method includes forming *in-situ* a plurality of acoustic transducers on a surface of a structure to be monitored. From a first position on the structure, bulk acoustic wave signals are generated for propagation in the structure. At a second position on the structure, the bulk acoustic wave signals propagating in the structure are detected. The detected bulk acoustic wave signals are analyzed to determine structural health of the structure. At least one of generating and detecting the bulk acoustic wave signals is performed by one or more of the acoustic transducers.

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