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(54) Title: RF REFLECTION FOR INSPECTING COMPOSITE MATERIALS

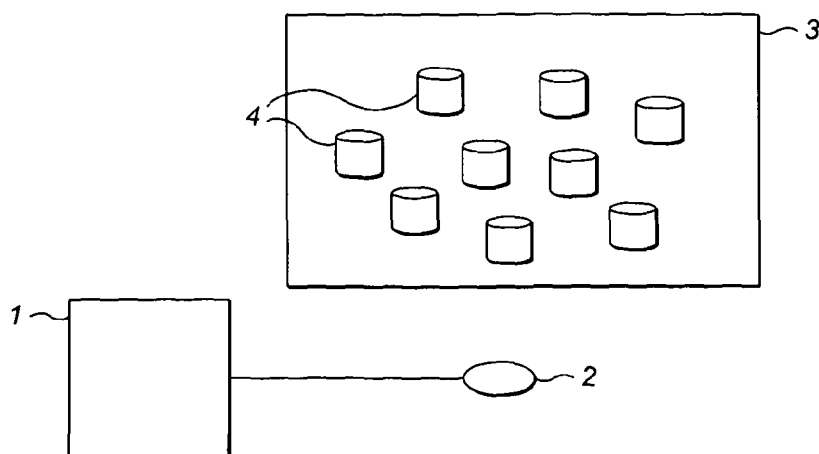


FIG. 1

(57) Abstract: A sensing system which comprises a material (30) formed of a matrix and a plurality of non - insulating particles (40) substantially equally spaced within the matrix such that the material has coherent electrical periodicity in at least one dimension; and a receiver (10), the receiver arranged to receive a source RF signal and a returned RF signal, the source RF signal being reflected by the non - insulating particles to produce the returned RF signal. A change in the position of one or more of the non - insulating particles causes the returned RF signal to change, such that a change in a property of the material can be determined from the returned RF signal.

