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Dr. Suresh Periyannan

Waveguide technique for the simultaneous measurement of temperature dependent properties of materials

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Inventors	Krishnan Balasubramaniam, Periyannan Suresh
Publication date	2020/10/6
Patent office	US
Patent number	10794870
Application number	14903002
Description	A method and a system is provided for measuring mechanical properties of a solid material using standard ultrasonic wave modes propagated in the solid material, which forms a waveguide, where the waveguide is encased a fluid media. The method and system can be at high temperatures. The system includes an ultrasonic transducer placed at one end of the waveguide that generates multiple wave modes, which travel in different paths along a length of the waveguide and are reflected. The system includes a set of corresponding sensors for detecting the amplitude and time of flights, and includes a processor means to analyze the detected signals.
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