

# Using the Ultrasonic Goniometer to Generate Ultrasonic Surface Waves for Materials Evaluation

W. Weston-Bartholomew

Department of Electrical Engineering, The University of the West Indies, St Augustine, Trinidad and Tobago, West Indies

**Abstract:** *This paper discusses one of the uses of the Ultrasonic Goniometer. The goniometer applies the theory of critical angle reflection from a liquid-solid interface. The temperature of the Liquid has to be, controlled. A theoretical analysis was done to determine the limit control of the temperature. Moreover, when measurements of critical angle are done under this controlled condition, the temperature coefficient of elasticity for the surface wave on materials can be calculated.*

**Keywords:** *Ultrasonic Goniometer, surface waves, temperature, materials evaluation*