
Shear Properties of Graphite Single Crystals*

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ABSTRACT

Room temperature shear modulus measurements have been made on purified, natural graphite single crystals by ultrasonic and static means. Several crystals were measured using both techniques and good agreement was obtained. Values of $c_{44}$ for graphite crystals obtained ultrasonically and statically range from $0.01$ to $0.17 \times 10^{11}$ dynes/cm$^2$. The ultrasonic method for measurement of $c_{44}$ in graphite crystals will be described. The static measurements are made by unidirectional shear with essentially zero normal force. Stress-strain curves obtained statically, by increasing maximum stress cyclically until shear occurs, will also be discussed.

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