



Product Code . JL-ELA-5516

Rubber in Shear Apparatus

Description

Rubber in Shear Apparatus

Features

Low cost, effective teaching Self-contained Wall mounted Range of pivot angles supplied Optional bearings available.

Determination of modulus of rigidity and Poissons Ratio

Range of Experiments

To determine the variation of deflection with applied load

To investigate the relationship between shear stress and shear strain.

To find the modulus of rigidity of the rubber block

Description:

Rubber blocks in shear force are often used on engine and in equipment mounting to isolate vibrations.

They do this by absorbing shock energy by deforming.

This deformation leads to a decrease in cross-section as the block lengthens, an effect described by Poisson's Ratio.

After this experiment, students will understand the behaviour of a very flexible material such as rubber.

Rubber is interesting in that the lay person regards it as an 'elastic' material.

In engineering terms it is not as 'elastic' as steel and often exhibits a high degree of hysteresis.

A rubber block 150 x 75 x 25mm is bonded to two aluminium alloy plates.

One plate is screwed to a wall, whilst the other has a shear load applied by a loaded weight hanger.

A dial gauge measures the deflection of the block.

This equipment is part of a range designed to both demonstrate and experimentally confirm basic engineering principles.

Great care has been given to each item so as to provide wide experimental scope without unduly complicating or compromising the design.

Each piece of apparatus is self-contained and compact.

Setting up time is minimal, and all measurements are made with the simplest possible instrumentation, so that the student involvement is purely with the engineering principles being taught.

A complete instruction manual is provided describing the apparatus, its application, experimental procedure and typical test results.

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