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Product Name :
Torsion of Rods and Tubes

Product Code :
LBNY-0005-13900038



Description :

The Torsion of Rods and Tubes is mounted onto a bearing shaft, which is rotated using a thumb wheel and fine worm/wheel gearing mechanism integral to the torsion head. The Torsion of Rods and Tubes comprises of a torsion head at one end and a fixed tailstock at the other, between which are held a variety of torsion specimens in three (3) jaw chucks.

The thumb wheel and gearing applies known torque to the torsion specimen, whilst an integral load cell records the torque force being applied. The signals from the load cell and angular position sensor is fed directly into the Interface. Fine rotational movement, in each direction, of each chuck allows accurate alignment of the Torsion of Rods and Tubes specimens. An angular position sensor is also mounted at the torsion head end to monitor the angular twist of the torsion specimens. Each torsion specimen has profiled ends to match the clamping pattern of the chucks.

Experimental Capabilities:

Comparison of the extended theory of torsion for a hollow square section member with experimental values
Verification of the classical theory of torsion in circular section rods and tubes
Comparison of a tube and a similar tube with a 1mm slit along the length
Shear modulus
Polar moment of inertia
Modulus of Rigidity, G.

Technical Specification :

Torsion specimens held within a fixed and movable chuck
5 torsion specimens including round aluminium rod, round aluminium tube, round aluminium tube with 1mm

(approx.) side slit, square aluminium tube, round solid acrylic rod
To allow the study of torsional behaviour for rods and tubes
To have torque applied to specimen using worm and wheel arrangement
To have torque force output using load cell
To have angular rotation output via angular position sensor
Comprehensive instruction manual provided
Must be used with universal Frame and Stand
Must be used with Interface.



Laboratory Instrument India