Strength of Materials



Deformation in Curved Axis Beams Apparatus (EDC-SM-101)

EXPERIMENTAL DATA:

- Investigation of Bending behavior of a curved-axis beam like Circular beam, Semi- circular beam and Quadrant beam.
- Application of the principle of virtual forces to calculate deformation in curved beams.
- Comparison of calculated and measured deformations.



DESCRIPTION:

This experimental setup contains five different beams attached to base plate with assemblies to implement calculated weights and finding the deflection with deflection gauges. The beams include a circular beam, a semi-circular beam, a right-angle beam and curved davit.

The beam under test is loaded with weights. Dial gauges record its horizontal and vertical deformations. The various elements of the experiment are clearly laid-out and housed securely in a storage system. The calculations are done and compared with measured values.

TECHNICAL DATA:

- Cross-section dimensions of beams (mm): 20 x 5
- Material: Stainless Steel
- Radius of Curved Beams: 150mm
- 1 set of weight
- Dial gauge 0- 25.4mm indicator with increments of 0.01mm.

SCOPE OF DELIVERY:

- 1 x EDC-SM-101
- 1 x Weight Set
- 1 x Circular beam
- 1 x Semi-circular beam
- 1 x Quadrant beam
- 1 x Right angled beam
- 1 x Instructional Manual

DIMENSIONS AND WEIGHT:

L x W x H (mm): 500 x 450 x 600

Weight Approx.: 17 kg

