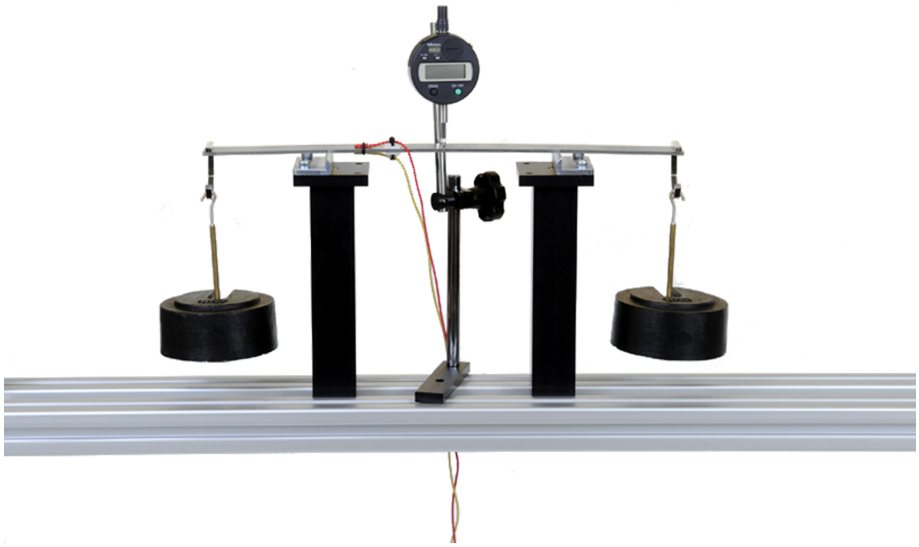
STRAIN MEASUREMENT for STRUCTURES

HST35



Year 2
study

Features

- Unique to HST Structures Range.
- Five test specimens; Cantilever, bending, box, tapered
- Strain gauges on all specimens
- Quick change around and connection
- Deflection used for relationship with strain
- Adjustable Span.
- Dedicated e-book supplied

Description

Two beam supports with either knife edge or clamp plate are set up inside the working area of the HST1 Universal Frame and Stand (sold separately) in order to carry five different strain gauged test specimens. The first is a calibration beam intended to be put into circular bending by four point loading. Three cantilevers show the effect of different materials and a varying width. The fifth specimen is a hollow square section cantilever with an offset end load and strain gauges for bending and torsion. The strain gauge outputs are fed into the HDA200 Interface (sold separately). A dial gauge on a moveable stand is provided with an output to the HDA200 Interface (sold separately). A set of weights and Load hangers is supplied as standard.

Related Laws/Applications

- Strain.
- Bending Theory.
- Stress.
- Gauge Factor.
- Radius of Curvature.
- Modulus of Elasticity.

Learning capabilities

- Determination of the gauge factor.
- Comparison of experimental results on different materials with strain / stress conversion using Young's Modulus.
- Separation of combined bending and torsion on a hollow square section cantilever.
- Understanding of Stain Gauge setup.
- Different Clamp Arrangements.

Technical Specification

- Steel specimen: 410(L) x 25.4(W) x 3.2(T) mm
- Steel specimen: 270(L) x 25.4(W) x 3.2(T) mm
- Aluminium specimen: 270(L) x 25.4(W) x 3.2(T) mm
- Steel tapered specimen: 270(L) x 30 narrowing to 20(W) x 3.2(T) mm
- Aluminium box section: 585(L) x 25.4(W) x 25.4(H) x 1.6(T) mm
- Digital Dial Gauge: 12.7mm travel; 0.01mm resolution
- Weights set: 2 x 5N, 4 x 10N, 4 x 20N, 2 x 50N

Essential Ancillaries

- HST1 (or HST100)
- HDA200

What's in the Box?

- 5 x Specimens
- 1 x Dummy Gauge
- 2 x Fixed Pillars
- 2 x Knife Edges
- 2 x Stirrups
- 4 x Load hanger
- 1 x Digital Dial Gauge and Data Cable
- 2 x 5N, 4 x 10N, 4 x 20N, 2 x 50N weights
- 1 x Tape measure
- Accessories container
- 2 x Hex wrench
- Instruction manual
- E-book
- Packing list
- Test sheet

You might also like

- HST20
- HSM18

Weights & Dimensions

- Weight: 30 kg
- Length: 630mm
- Width: 340mm
- Height: 220mm

Essential Services

- 110/120V, 60Hz or 220/240V, 50Hz, single phase, live neutral and earth for optional HDA200

Operational Conditions

- Storage temperature: -10°C to +70°C
- Operating temperature range: +10°C to +50°C
- Operating relative humidity range: 0 to 95%, non condensing

Ordering information

To order this product, please call PA Hilton quoting the following code: HST35

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COUNTRY OF ORIGIN - UK WARRANTY PERIOD - 5 YEARS