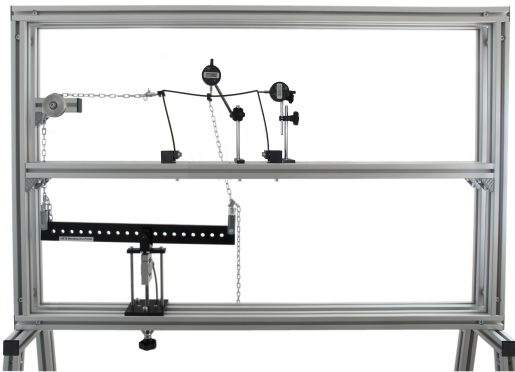


PLASTIC BENDING of PORTALS

HST8



Year 3
study

Features

- Commercially available specimen material.
- Rectangular & Pitched portals supplied (10 each).
- Realistic Portal shapes.
- Two Digital Dial gauges.
- Proportioning beam distributes vertical and horizontal loads.
- Dedicated e-book supplied

Description

Two portal frames (pitched and rectangular) are mounted within two "ground" supports, in either a pinned or fixed condition. A proportioning bar is held horizontally by loading chains that run to the portal frame and to the screwjack loading mechanism (with integral load cell). Depending on the position of the loading mechanism on the proportioning bar depends on the proportion of the load being applied either horizontally or vertically. The load applied is measured using the load cell in the loading mechanism, which is fed directly into the HD200 Interface (sold separately). Two moveable dial gauges are used to monitor the deflections into the plastic range of deformation of the portal. Additional portal sets are available as an optional extra (HST8a).

Related Laws/Applications

- Collapse Mechanism.
- Bending Moment Diagram (BMD).
- Degree of Redundancy.
- Plastic Hinges.

Learning capabilities

- Verifies that hinges occur at positions of greatest bending moment
- Studies the change in the collapse mechanism as the ratio of horizontal to vertical load is varied
- Determines the increase in collapse load as the degree of redundancy increases

Technical Specification

- 13 x 3mm black mild steel portals; 300mm span
- Loading Mechanism: 0...500N
- Proportioning beam with 20 through holes for load variation; 25mm pitch
- Digital Dial Gauge: 12.7mm travel; 0.01mm resolution

Essential Ancillaries

- HST1 (or HST100)
- HDA200

Recommended Ancillaries

- HST8A
- HST8B

What's in the Box?

- 5 x Rectangular Portal specimen
- 5 x Pitched Portal specimen
- 1 x Proportioning Beam
- 1 x Loading Mechanism
- 2 x Digital Dial Gauge and cable
- 2 x Dial Gauge Stand
- 2 x Pinned Support
- 2 x Fixed Support
- 2 x Chain link set
- 1 x Tape measure
- Accessories container
- Hex wrench
- 13mm spanner
- Instruction manual
- Software
- E-book
- Packing list
- Test sheet

You might also like

- HST3
- HST7

Weights & Dimensions

- Weight: 14 kg
- Length: 1220mm
- Width: 100mm
- Height: 700mm

Essential Services

- 110/120V, 60Hz or 220/240V, 50Hz, single phase, live neutral and earth for 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: HST8

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COUNTRY OF ORIGIN - UK WARRANTY PERIOD - 5 YEARS