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Product Name :

Unsymmetrical Cantilever

Product Code :

SLE/ETP/15



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Description :

Unsymmetrical Cantilever (Product Code: SLE/ETP/15) is a frame-mounted structures apparatus used to load a cantilever and measure its deflection in any coplanar direction, so students can study bending of unsymmetrical sections in strength-of-materials labs. The test beam hangs vertically from a holding ring that rotates through 360 degrees, and a cross-piece at the free end locates the shear centre. It is made by **Jain Scientific Equipments Pvt Ltd (ScienceLab)**, an OEM manufacturer of lab equipment for technical institutes, at its own factoryin Ambala, India.

Key Details

Parameter	Detail
Beam mounting	Test beam mounted vertically in a frame
Holding ring	Upper end of the test beam fixes to a holding ring that can rotate through 360 degrees
Measurement	Deflection of the loaded cantilever in any coplanar direction
Loading method	Loads applied to the beam in set increments while displacement is recorded
Analysis	Mohr's circle method to find the principal second moments of area of each section
Shear centre	Cross-piece attached to the free end lets loads be applied at different positions across and outside the section
Product code	SLE/ETP/15
Manufacturer	Jain Scientific Equipments Pvt Ltd (ScienceLab) — OEM
Country of origin	India (made in Ambala, Haryana)

What Is the Unsymmetrical Cantilever Used For?

Angles, channels and other sections without two axes of symmetry do not simply bend in the direction they are pushed. A load that is not aligned with a principal axis also makes the beam deflect sideways, and a load that misses the shear centre makes it twist as well. The Unsymmetrical Cantilever turns these abstract ideas from the textbook into measurements students can see.

Students apply loads in set increments, record the displacement, then rotate the beam on its holding ring and repeat. Plotting the results and using Mohr's circle gives the principal second moments of area of each section. For the shear centre, a cross-piece on the free end lets loads be moved across and outside the section until the twisting disappears. Take readings on loading and unloading, and keep loads within the elastic range of the beam.

OEM Manufacturer

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